by Schneider Electric

OPERATION/CONFIGURATION

DX8100 Series
Hybrid Video Recorder

Client Application Software

C2631M-C (7/09)

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Client Operation/Configuration

You are reading DX8100 Series hybrid video recorder (HVR) version 2.0 documentation. The information in this manual describes how to configure and use the DX8100 system in your security application.

For a brief description of the DX8100 server and client applications, refer to *Welcome to DX8100 Series HVR Client Application*.

Welcome to DX8100 Series HVR Client Application

The DX8100 Series HVR features IP camera recording, external JBOD (just a bunch of disks) storage, remote client connectivity to as many as 200 HVR/DVR servers, dual monitor display, multimode recording for up to 16 ATM/POS devices or single mode recording for up to 4 ATM/POS devices, system health status and configuration, multi-event recording, continuous motion detection, alarm, and scheduled recording. The DX8100 is a high-performance, computer-based, easy-to-operate HVR and client application system. Models range from an 8-channel, single 250 GB hard disk drive (HDD) unit to a 32-channel unit with up to 6 TB of internal storage. An external JBOD unit adds as much as 6 TB, increasing DX8100 storage capacity up to 12 TB.

DX8100 software runs on two platforms:

- The DX8100 HVR server software runs on the DX8100 Series HVR.
- The DX8100 Client Application software runs on a personal computer and allows you to log on and operate the DX8100 HVR server system from your local computer.

Fully implemented networking capabilities allow remote administration, playback, and export using the accompanying client application. Live viewing is supported on a variety of client platforms, including Internet browsers and pocket PC-compatible hand-held devices. Versatile high-speed search operations include time and date, event list, thumbnail, and intelligent pixel searching. Extensive scheduling features allow customizing of weekday, weekend, and special event recording.

The DX8100 provides a graphical user interface (GUI), allowing you quick and efficient access to all setup and operations functions. Scheduled or manual backup can be performed using a number of optical, external, and mapped network drive options.

An online Help system allows you quick access to information about how to configure and operate the DX8100 server and DX8100 client application.

The DX8100 also supports the following computer-based applications:

- *DX8100 Client Emergency Agent*
- *DX8100 Viewer* on page 14
- *DX8100 Mobile Client* on page 14
- *DX8100 Web Client* on page 15

DX8100 CLIENT EMERGENCY AGENT

The DX8100 Client Emergency Agent works with networked DX8000 Series HVRs to alert users when one or more particular channels detect a motion and/or alarm event. The Emergency Agent runs on a networked client computer.

DX8100 VIEWER

The DX8100 Viewer is capable of playing back a variety of video, still image, and audio media formats. It is designed to recognize and verify the digital watermark that is embedded in DX8000 Series HVR native video. Watermarking is used to authenticate the originality of a video file and to alert users of possible image tampering. The viewer application runs automatically each time a CD or DVD created by the DX8100's export feature is inserted into a Windows®-based computer. The software can also be installed on a computer and opened independently when necessary.

DX8100 MOBILE CLIENT

The DX8100 Mobile Client allows you to view live video remotely from multiple cameras and sites. Networking capabilities include local connection using wire-bound or wireless local area network (LAN) technologies or remote connection using the Internet. The DX8100 Mobile Client software runs on a standard pocket PC-based personal digital assistant (PDA), and it can display a single channel of real-time video from any camera attached to any DX8100 HVR on the network. Features include hierarchical organization of multiple sites, built-in security through password protection, and an adjustable viewing area, including full-screen view.

DX8100 WEB CLIENT

The DX8100 Web Client allows you to view live video and operate pan, tilt, and zoom (PTZ) features of cameras attached to DX8100 HVRs. Using a standard Web browser, you can remotely monitor up to 16 cameras from up to five DX8100 HVR servers simultaneously. Each DX8100 HVR can support up to 100 Web clients either internally within an organization or externally through the Internet.

DX8100 FEATURES

The DX8100 version 2.0 release includes new features: IP camera recording, external JBOD, and remote client connection to as many as 200 DX8100 servers. Refer to the following list for additional features.

• Up to 480/400 images per second (ips) Recording Rate at CIF	• Local and remote administration, live, search, and playback viewing
• Dynamically adjustable frame rate and image quality for motion, alarm, and pre-alarm recording	• Scheduled backup
• Pre- and post- alarm recording up to 60 seconds (up to 15 minutes with optional 512 mb ram upgrade)*	• Export and import system configurations
• 2 Standard audio channels with live audio over the network	• Multilevel password and user configuration
• 8/16/24/32 alarm inputs and 8/16/24 relay outputs	• Automatic image watermarking
• User-definable PTZ presets, patterns, and preset tours	• Multilingual support (English, French, German, Italian, Polish, Portuguese, Russian, and Spanish)
• Online help	• Standard DVD-R burner writes to CD-R and DVD-R media
• Thumbnail, pixel (smart search), ATM/POS search modes	• External storage RAID 5 option
• Instant playback	• NTP time server compatible
• Network up to five DX8100/DX8000s server	• Optional KBD300A keyboard support for camera selection and PTZ control
• 5 Simultaneous connections per server	
• Unlimited licenses for remote computer, Web, and handheld client	

*Pre-alarm time estimate is based on 16-channel recording at a resolution of 320 x 240 (CIF) and a frame rate of 5 ips.

Getting Started with DX8100 Client Software

This section describes the system requirements, software installation, and working with security. The following topics are included:

- *Description of DX8100 Client Software*
- *Recommended System Requirements*
- *Windows XP Display Properties Configuration Requirements*
- *Installing the Client Application* on page 17
- *Enabling IPSec Services* on page 17
- *Disabling IPSec Services* on page 18

DESCRIPTION OF DX8100 CLIENT SOFTWARE

The DX8100 version 2.0 Client application allows operators and HVRs to be geographically dispersed. One computer client application can connect simultaneously with up to 200 HVR/DVR servers (version 2.0 or earlier). Up to 200 server sites can be added to the Connection List. For more information about the Connection List, refer to *Connecting to DX8100 HVR Server Sites* on page 20.

The Client application facilitates

- Remote viewing of live and playback video
- Index, thumbnail, POS, and pixel searching
- Exporting to a variety of media and formats
- Printing still images from video
- Limited remote control and administration

RECOMMENDED SYSTEM REQUIREMENTS

The following minimum system requirements are needed to operate the DX8100 Client, Emergency Agent, and the DX8100 Viewer software:

- Processor: Intel® Dual core™ core 1.6 GHz or higher
- Memory: 2 GB RAM, minimum
- Video: AGP or PCI-e VGA card with minimum 64 MB video RAM (nonshared memory), 1024 x 768 or 1280 x 1024 display resolution, and DirectX® 8.1 application programming interface
- Monitor: SVGA or XGA with 1024 x 768 or 1280 x 1024 resolution
- Operating System: Windows 2000 (SP4) or Windows XP Professional DirectX 8.1 or later, 500 MB free disk space
- Web Browser:
  - Multicast: Microsoft® Internet Explorer® 6.0
  - Remote Client: Internet Explorer 6.0 and 7.0
  - Web Client: Internet Explorer 6.0 and 7.0
- Mobile PDA Client: A Pocket PC with Microsoft PPC 2002 or higher, Intel XScale® CPU with minimum 64 MB of memory

WINDOWS XP DISPLAY PROPERTIES CONFIGURATION REQUIREMENTS

Pelco recommends that the fade effect and shadow option for menus and tooltips be deselected. Any time these display effects are active, the CPU usage increases and impacts system performance.

INSTALLING THE CLIENT APPLICATION

To install the Client application:

1. Start the Windows operating system.
2. Close all programs, including any antivirus software.
3. Insert the DX8100 resource disc into the computer's DVD drive and wait for the DX8100 resource disc window to appear.
4. Click Software. The DX8100 software installation options appear.
5. Click Client. The DX8100 Security Setup dialog box opens.
6. Verify that the Install IPSec Configurations check box is selected.

   NOTE: Internet Protocol Security (IPSec) is a standard security protocol used by the DX8100 Series HVR and its clients to communicate safely over a network. Although IPSec can be disabled at any time, it must be enabled to communicate with a DX8100 server.
7. Click Next. The DX8100 Client Setup dialog box opens.
8. Click Next. The Software License Agreement dialog box opens.
9. Read the license agreement and then select "I accept this License Agreement."
10. Click Next. The Select Installation Folder dialog box opens.
11. Click Next to accept the default installation folder.
12. Click Finish to complete the installation process.

SETTING UP SECURITY SERVICES

To communicate with a networked DX8100 Series HVR, IPSec must be enabled on your computer. Disabling IPSec services may hamper your computer's ability to communicate with DX8100 servers. Consult your system administrator before disabling IPSec.

This section describes how to setup IPSec services and includes the following topics:

- *Enabling IPSec Services*
- *Disabling IPSec Services* on page 18

ENABLING IPSEC SERVICES

To see the Manage IPSec Settings menu option from the Start menu, the Start menu has to be changed to Classic View.

To enable IPSec services:

1. Do one of the following:
   - Verify that the Start menu is in Classic View.
   - Set the Start menu to Classic View.
2. Go to Start > Manage IPSec Settings. The DX8100 IPSec Policy dialog box opens.
3. Select the Enable DX8100 IPSec Policy check box (if it is not already selected).
4. (If applicable) Set the Start menu to its previous view.

DISABLING IPSEC SERVICES

To see the Manage IPSec Settings menu option from the Start menu, the Start menu has to be changed to Classic View.

To disable IPSec services:

1. Do one of the following:
   - Verify that the Start menu is in Classic View.
   - Set the Start menu to Classic View.
2. Go to Start > Manage IPSec Settings. The DX8100 IPSec Policy dialog box opens.
3. Deselect the Enable DX8100 IPSec Policy check box.

   NOTE: Disabling IPSec services may hamper your computer's ability to communicate with DX8100 servers. Consult your system administrator before disabling IPSec.
4. (If applicable) Set the Start menu to its previous view.

STARTING THE DX8100 CLIENT APPLICATION

This section describes how to start the DX8100 Client application and includes the following topics:

- *Before You Start DX8100 Client Software*
- *Starting DX8100 Client Software*
- *Automatic System Upgrade*

BEFORE YOU START DX8100 CLIENT SOFTWARE

Ensure that the following requirements have been met before starting the DX8100 Client application:

1. Make sure there is at least one active DX8100 Series HVR available on your network and your computer is set up to access it. Consult your network administrator for more information.
2. Make sure you have a valid, active account on the DX8100 HVR server you want to access. Consult your system administrator if you have not been assigned a DX8100 user name and password.
3. Make sure IPSec services are installed and enabled on your computer. For more information, refer to *Installing the Client Application* on page 17 and *Enabling IPSec Services* on page 17.

STARTING DX8100 CLIENT SOFTWARE

To avoid potential problems and conflicts within your computer's video subsystem, run only one Client application at a time.

To start the DX8100 Client application:

- Double-click the DX8100 Client icon on your desktop.

AUTOMATIC SYSTEM UPGRADE

The client application checks the network for a newer version of the software each time it starts. If there is a new version, a message appears. If you click Yes, the DX8100 Client application automatically installs the new software restarts your computer.

To check the current version of software:

- Choose Help > About.

Logging On to the Client Application

The default password for the DX8100 Client application is "000000." You should change the client password immediately after logging on to the software for the first time. Follow the instructions below to change the DX8100 Client application login password. For information about automatically connecting to a remote, refer *Automatically Connecting to a Remote Site* on page 25.

To log in to the DX8100 Client:

1. Start the DXDX8100 Client application. The DX8100 Client Password dialog box opens.
2. Enter a valid password in the "Input password" box.
3. Click OK. The DX8100 Client application starts.

Pelco recommends that you change the DX8100 Client application default password after you first log in to the DX8100 Client application. For information about changing the default password, refer to *Changing the DX8100 Client Application Login Password*.

CHANGING THE DX8100 CLIENT APPLICATION LOGIN PASSWORD

To change the DX8100 Client password:

1. Wait while the software loads and the DX8100 Client application window opens.
2. From the DX8100 menu bar, choose File > Client Password. The DX8100 Client Password Setup dialog box opens.
3. Enter the old password in the "Old password" box.
4. Enter a new password in the "New password" box.
5. Re-enter the new password in the "Confirm" box.
6. Click OK.

   Remember the new client password or write it down and store it in a secure location.

ENABLING DIRECTDRAW VIDEO HARDWARE ACCELERATION

If your computer's video hardware supports Microsoft® DirectDraw® extensions, you can enable DirectDraw to enhance video performance. Enabling DirectDraw improves performance by delegating graphics acceleration duties to your computer's video hardware instead of your computer's main processor.

⚠ **WARNING:** Do not enable DirectDraw on the Client application unless you are certain that your hardware supports DirectDraw hardware acceleration. Check the documentation that came with your computer and your graphics card before enabling DirectDraw. Although some VGA cards support DirectDraw, not all are compatible with the DX8100 Client application. Check the Pelco Web site for a complete list of compatible VGA cards.

To enable DirectDraw hardware acceleration:

- Select View > DirectX Draw.

Connecting to DX8100 HVR Server Sites

This section describes how to connect to DX8100 HVR server sites and includes the following topics:

- *Adding a DX8100 HVR Server to the Connection List*
- *Working with Groups* on page 23
- *Working with Remote Sites* on page 24
- *Exiting the DX8100 Client Application* on page 26

ADDING A DX8100 HVR SERVER TO THE CONNECTION LIST

The DX8100 Client application allows operators and HVRs to be geographically dispersed. Up to 200 HVR/DVR servers can be actively viewed from a single client. Up to 200 DX8100 server sites can be added to the Connection List.

The Client application facilitates the following:

- Auto Connection to servers at login
- Remote viewing of live and playback video
- Index, thumbnail, POS, and pixel searching
- Exporting to a variety of media and formats
- Printing still images from video
- Limited remote control and administration

This section describes how to add a DX8100 server to the Connection List and includes the following topics:

- *Adding a Site with a Known IP Address*
- *Adding a Site with an Unknown IP Address* on page 21
- *Deleting a DX8100 HVR Server* on page 22
- *Deleting a Group* on page 24

ADDING A SITE WITH A KNOWN IP ADDRESS

To add a site to the Connection List when the IP address is known:

1. On the DX8100 toolbar, click the Connection List button . The Connection List dialog box opens.
2. Click Add. The Server Information dialog box opens.
3. Enter the name of the DX8100 Series HVR to which you want to connect.
4. Enter the IP address of the HVR.
5. If necessary, and after you have read the following information, enter a new base port number (9002 is the default).
   - Consult your network administrator before assigning or changing port numbers.
   - Make sure that the ports are not blocked internally but are protected from external threats by a firewall. Client and server ports must be identical.
6. If necessary enter a software upgrade port number (9003 is the default).

7. Click OK. The site appears in the Connection List.

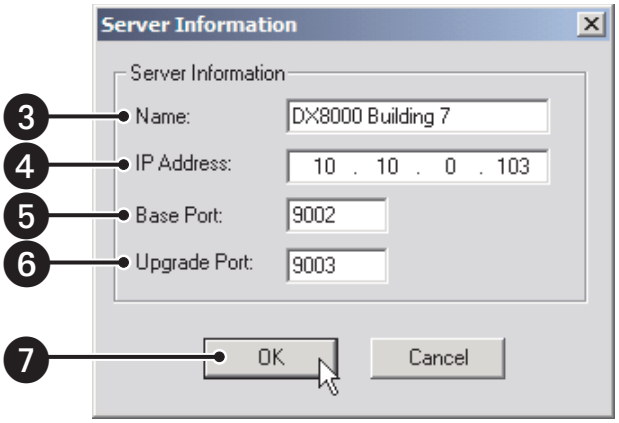

Figure 1. Server Information Dialog Box

ADDING A SITE WITH AN UNKNOWN IP ADDRESS

This section describes how to add a site with an unknown IP address. To be successful, the following stipulations must be satisfied:

- Each HVR must be attached to the same subnet.
- The first three octets of the IP address of the subnet must be known.
- The range of addresses used in the last octet of the subnet must be known.

NOTE: The DX8100 scan process running on the computer takes much longer than the scan process does running on the DX8100 server.

To add a remote HVR site to the Connection List when you do not know the IP address of the site:

1. On the DX8100 toolbar, click the Connection List button . The Connection List dialog box opens.
2. Click DX8100 Scan. The DX8100 Scan dialog box opens.
3. Enter an IP address range to search for HVR sites.
   a. Enter the first three octets of the IP range you want to search; for example, 10.10.1.
   b. Enter the beginning value for the search range in the fourth octet; for example, 001.
   c. Enter the final value for the search range in the box provided; for example, 254. Each octet of the IP address must be an integer between 1 and 255.
4. Click Find.
5. Select one or more DX8100 servers to add to the Site Tree.
6. Click Add. The site appears in the Connection List.

7. Click OK when you return to the Connection List dialog box.

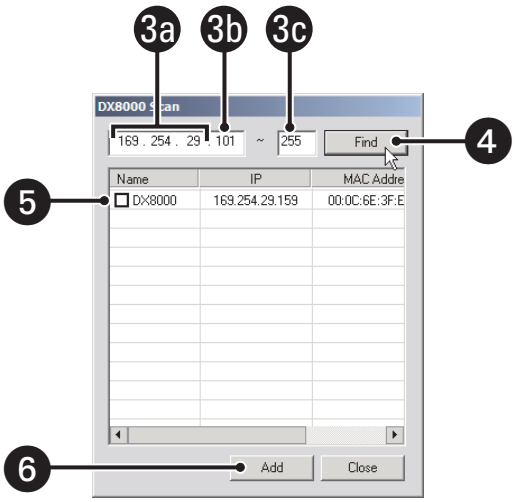

Figure 2. DX8100 Scan Dialog Box

DELETING A DX8100 HVR SERVER

The DX8100 Client allows you to delete a DX8100 HVR server from the Connection List.

To delete a DX8100 server from the Connection List:

1. On the DX8100 toolbar, click the Connection List button . The Connection List dialog box opens.
2. Select the DX8100 Series HVR you want to delete.
3. Click Delete. The site is removed from the Connection List.
4. Click OK.

EDITING DX8100 SERVER INFORMATION FROM CONNECTION LIST

The DX8100 Client allows you to edit a DX8100 server's information from the Connection List dialog box.

To edit a DX8100 server's information:

1. On the DX8100 toolbar, click the Connection List button . The Connection List dialog box opens.
2. Select the DX8100 Series HVR you want to edit.
3. Click Edit. The Server Information dialog box opens.
4. Enter a new name for the server.
5. Enter a new IP address for the server.
6. If necessary, and after you have read the following information, enter a new base port number (9002 is the default).
   - Consult your network administrator before assigning or changing port numbers.
   - Make sure that the ports are not blocked internally, but are protected from external threats by a firewall. Client and server ports must be identical.
7. If necessary enter a software upgrade port number (9003 is the default).
8. Click OK. The site appears in the Connection List.

9. Click OK when you return to the Connection List dialog box.

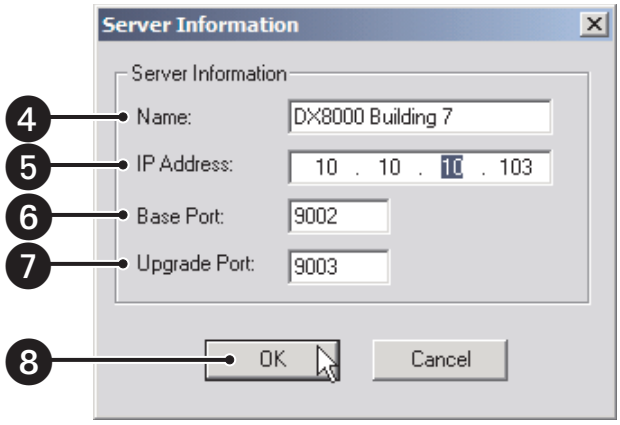

Figure 3. Editing Server Information

WORKING WITH GROUPS

The Connection List allows you to organize sites according to area, location, and other criteria.

This section describes how to use the Add Group feature within the Connection List to organize new and existing sites and includes the following topics:

- *Adding a Group to the Connection List*
- *Adding an Existing Site to a Group*
- *Adding a New Site to a Group* on page 24
- *Deleting a Server from a Group* on page 24
- *Deleting a Group* on page 24

ADDING A GROUP TO THE CONNECTION LIST

To add a group to the Connection List:

1. On the DX8100 toolbar, click the Connection List button . The Connection List dialog box opens.
2. Click Add Group. The Add Group dialog box opens.
3. In the Name box, enter a name for the new group.
4. Click OK. The newly created group is displayed in the Connection List.

ADDING AN EXISTING SITE TO A GROUP

1. On the DX8100 toolbar, click the Connection List button . The Connection List dialog box opens.
2. In the Connection List, click and drag an existing server entry to a group. The selected server is added to the group.

ADDING A NEW SITE TO A GROUP

1. On the DX8100 toolbar, click the Connection List button . The Connection List dialog box opens.
2. Click to highlight a group.
3. Click Add. The Server Information dialog box opens.
4. Enter the name of the DX8100 Series HVR to which you want to connect to.
5. Enter the IP address of the HVR.
6. If necessary, enter a new base port number (9002 is the default).

   NOTES:
   - Be sure to consult your network administrator before assigning or changing port numbers.
   - Client and server ports must be identical.
   - Verify that the ports are not blocked internally but are protected from external threats by a firewall.
7. If necessary, enter a software upgrade port number (9003 is the default).
8. Click OK. The site appears in the Connection List.
9. Click OK when you return to the Connection List dialog box.

DELETING A SERVER FROM A GROUP

1. On the DX8100 toolbar, click the Connection List button . The Connection List dialog box opens.
2. Click the plus sign (+) to expand a group. The HVRs in the group appear.
3. From the expanded group, click the HVR to select it.
4. Click Delete. The server is removed from the Connection List.
5. Click OK.

DELETING A GROUP

NOTE: Deleting a group does not delete the sites in the group. When a group containing sites is deleted, the sites in the deleted group are displayed at the root level of the Connection List.

1. On the DX8100 toolbar, click the Connection List button . The Connection List dialog box opens.
2. Click the group to select it.
3. Click Delete. The group is removed from the Connection List. The server sites that were in the deleted group now appear at the root level of the Connection List.
4. Click OK.

WORKING WITH REMOTE SITES

This section describes how to connect to and log in to a remote DX8100 server site. This section includes the following topics:

- *Connecting to a Remote Site* on page 25
- *Automatically Connecting to a Remote Site* on page 25
- *Logging In to a Remote Site* on page 25
- *Logging Out of a Remote Site* on page 26
- *Disconnecting from a Remote Site* on page 26

CONNECTING TO A REMOTE SITE

You can view live and playback video, and listen to live and playback audio, from multiple DX8100 HVR servers simultaneously. The Client application can connect to remote sites automatically.

To connect to an active DX8100 server on the network:

1. Right-click the remote site name from the Site Tree. The Remote Site Connect shortcut menu is displayed.
2. Select Connect from the shortcut menu.

AUTOMATICALLY CONNECTING TO A REMOTE SITE

To automatically connect to a remote site:

1. Start the DX8100 Client application. The DX8100 Client Password dialog box opens.

Figure 4. DX8100 Client Password Dialog Box

2. Click the Auto Connection check box.
3. Enter a valid password in the "Input password" box.
4. Click OK. The DX8100 Client application starts and will automatically connect to the remote DX8100 servers on the network.

LOGGING IN TO A REMOTE SITE

After a connection to a remote site has been established, you must log in with a valid user name and password to access the features of the DX8100 Series HVR.

The DX8100 comes equipped with the built-in user account, "Guest." Each time the unit is turned on, the Guest account is automatically activated. In addition to the Guest account, there are four other user access levels, or groups, that can be configured on the DX8100. The Guest user is granted only limited access to the system. The other four access levels range from the Administrator group, with the most rights and privileges, to the Restricted group, with the least rights and privileges. For more information about the rights and permissions of the user group to which you have been assigned, refer to *Definition of User Access Levels* on page 170.

To operate and configure all but the most basic features of the DX8100, you must be assigned a user account other than Guest. If you have not been assigned a user account, contact your system administrator before proceeding.

To log in to a remote site:

1. Select a remote DX8100 Series HVR site from the Site Tree.
2. From the DX8100 menu bar, choose File > User Log-in.

   You can also log in to a remote site by right-clicking its site name and then selecting User Log-In from the shortcut menu.
3. Enter a valid user name in the User Name field and a valid password in the Password field.
4. Click OK.

LOGGING OUT OF A REMOTE SITE

You can only log out of one server at a time. If you are logged in to multiple servers, you must log out of each server individually. Logging out of a remote HVR does not disconnect you from that system. Logging out will return you to the Guest account. To disconnect from a remote server, refer to *Disconnecting from a Remote Site*.

To log out of a remote HVR site:

1. Select the remote server from the Site Tree.
2. From the DX8100 menu bar, choose File > User Log-Out. Alternately, you can log out of a remote HVR by right-clicking its site name in the Site Tree, and then selecting User Log-Out from the shortcut menu.

DISCONNECTING FROM A REMOTE SITE

To terminate a connection with a remote DX8100 server:

1. Right-click the name of the remote site from the Site Tree.
2. Select Disconnect from the shortcut menu.

EXITING THE DX8100 CLIENT APPLICATION

To exit the DX8100 Client application and return to the Windows operating system, select File > Exit from the DX8100 Client menu bar.

Understanding the DX8100 Application Window

This section describes the DX8100 application window and its operation. The application window is the central control center where you can access to the DX8100 features and functions.

- View both live and recorded video
- Exit to the Windows environment
- Access DX8100 setup features
- Control camera PTZ functions
- Select cameras for viewing and recording
- Specify playback date and time
- Access playback controls

This section includes the following topics:

- *Description of the DX8100 Main Window*
- *Understanding View Panes and Panels* on page 35
- *Working with the Site tree* on page 41

DESCRIPTION OF THE DX8100 MAIN WINDOW

The application window is displayed after the DX8100 starts. The main window provides access to both live and recorded video. The DX8100 displays an hour glass when a task requires a longer time to complete.

This section describes the DX8100 main window and includes the following topics:

- *DX8100 Menu Bar* on page 30
- *DX8100 Toolbar* on page 33
- *Displaying the DX8100 Window from a Page* on page 34
- *Description of Operating Modes* on page 34
- *Understanding View Panes and Panels* on page 35

The following figure shows the parts of the DX8100 main window.Figure 5 shows the parts of the DX8100 main window.

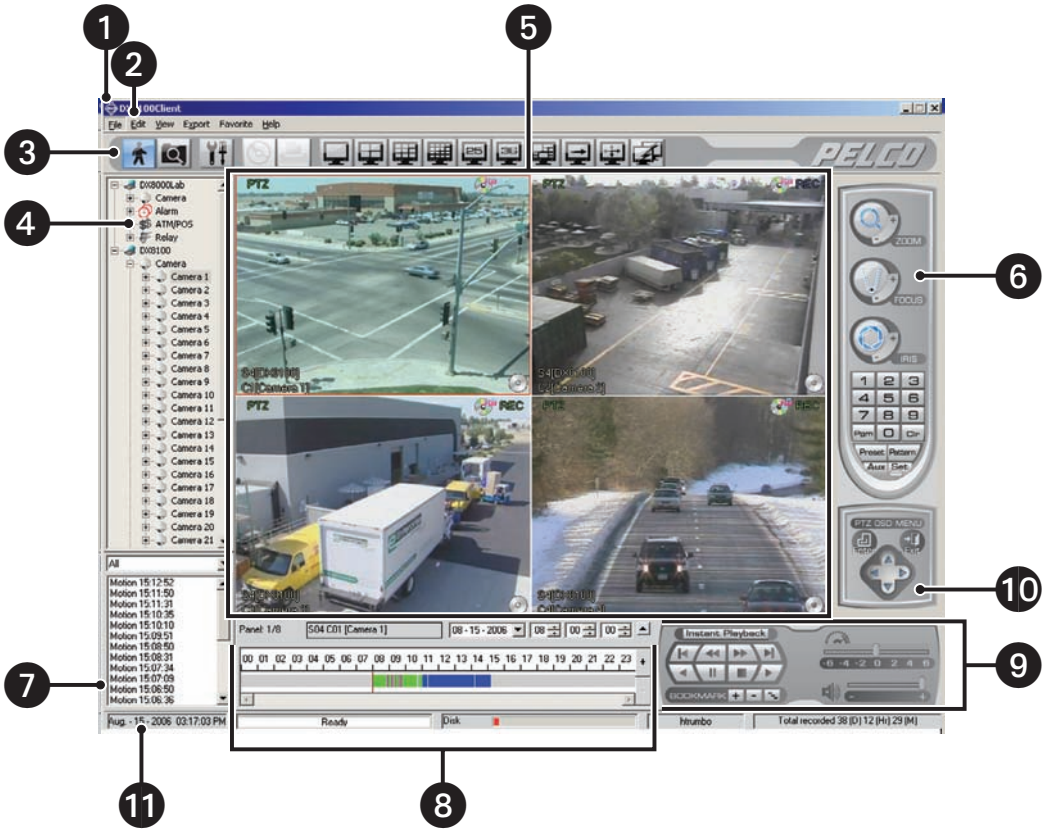

Figure 5. DX8100 Client Application Main Window

Table A describes the parts of the DX8100 application window.

Table A. Parts of the DX8100 Application Window

Item	Part	Description
1	Title Bar	Displays the DX8100 application title.
2	Menu Bar	Provides access to drop-down menus.
3	Toolbar	Provides access to display, setup, export, and search tools.
4	Site Tree	Displays top-down, hierarchical management of DX8100 resources, such as servers, cameras, alarms, and relays.
5	View Panels	Display live and playback video from attached cameras. A view panel consists of view panes. • **View pane:** A view pane is a division of a view panel. Each view pane contains only a single camera channel. Up to 36 view panes can fit in a single view panel. • **View panel:** A view panel is made up of the entire DX8100 viewing area. View panels are divided into multiple panes. A panel can display from one to 36 individual cameras. For additional information about view panels and panes, refer to *Understanding View Panes and Panels* on page 35.
6	PTZ Control Panel	Allows users with access rights to operate camera lens control features and to program PTZ presets, patterns, auxiliary outputs, and tours.
7	Index View Panel	Allows users with access rights to search motion and alarm events within a 24-hour period specified in the playback timeline. By default, this panel is not displayed.
8	Playback Timeline	Displays a 24-hour timeline marked with color-coded video events. Allows users with Standard User access rights to select a date and time for playback.
9	Playback Control Panel	Provides buttons for users with access rights to control video playback. Includes forward and reverse playback and still image. It also provides controls for playback speed and volume.
10	PTZ OSD Menu or Digital Zoom Control	This control provides two functions depending on whether the DX8100 is operating in Live view or playback mode: • **Live view mode:** Provides whether the DX8100 is operating in Live view or playback mode: users with access rights to operate PTZ OSD features. For information about using the PTZ OSD menu controls, refer to *Using the PTZ OSD Menu Control* on page 61. • **Playback mode:** Provides users with access rights to operate digital zoom features.
11	Status Bar	Displays the current date and time, recorder processing status, disk status indicator, user name (of the current logged in user), and total amount of recorded video. **NOTE:** As the storage array of the DX8100 fills beyond its capacity, video is deleted in a first-in, first-out (FIFO) fashion. The disk status indicator on the status bar shows the amount of disk space used by recorded video. The red indicator marks the current recording position of the disk array, blue indicators mark parts of the array that are storing previously recorded video, and clear indicates that no video has been recorded in that area of the array.

DX8100 MENU BAR

This section describes the DX8100 menu bar commands and includes the following topics:

- *File Menu* on page 30
- *Edit Menu* on page 30
- *View Menu* on page 31
- *Export Menu* on page 32
- *Favorite Menu* on page 32
- *Help Menu* on page 33

File Menu

Table B describes the DX8100 File menu commands.

Table B. File Menu Commands

Command	Description
Client Password	Opens the DX8100 Client Password Setup dialog box for changing the client log-on password.
User Log-in	Opens the User Log-In dialog box for entering the user name and password to log in to the DX8100.
User Log-out	Immediately logs the current user out of the DX8100. The system returns to the default mode.
Software Upgrade	Opens the Select Upgrade Package dialog box for selecting the source from which to access files to upgrade the DX8100 software. This command is available only when you log in to the DX81000 as Administrator.
Backup Search	Opens the Backup data list dialog box for searching archived backed up data.
End Backup Search	Ends the Backup Search mode and returns the DX8100 to the normal HVR Search mode.
Multiple Configuration Upload	Opens the Multi-configuration Upload dialog, displaying a list of DX8100 sites and groups. Use this dialog box to select specific DX8100 sites, to configure the file to upload to those sites, and to initiate the upload process.
Exit	Exits the DX8100 client application.

Edit Menu

Table C describes the DX8100 Edit menu commands.

Table C. Edit Menu Commands

Command	Description
Export Setup	Opens the DX8100 Setup File Export dialog box for exporting the DX8100 system configuration settings to a specific file name and location. The Export feature also allows you to export the DX8100 settings to a specified location for later retrieval. For more information, refer to *Using the Edit Menu to Perform an Export* on page 175.
Import Setup	Opens the DX8100 Setup File Import dialog box for importing a DX8100 system configuration file. For more information, refer to *Using the Edit Menu to Perform an Export* on page 175.

View Menu

Table D describes the DX8100 View menu commands.

Table D. View Menu Commands

Command	Description
OSD	Opens a submenu with the following choices: • **Site name:** A global setting that, when selected, displays a site's name in the respective view pane. • **Camera name:** A global setting that, when selected, displays a camera's name in the respective view pane. • **Video recording:** A global setting that, when selected, displays an icon in the upper right corner of the pane and enables video recording for the cameras assigned to a view pane. • **Audio recording:** A global setting that, when selected, enables audio recording for the cameras assigned to a view pane. The DX8100 compresses audio data to save space. In this case, recorded audio may not be of the same quality as live audio. • **PTZ:** A global setting that, when selected, enables PTZ capability for the cameras assigned to a view pane. • **Instant recording:** A global setting that, when selected, enables instant recording capability for the cameras assigned to a view pane. • **POS:** A global setting that, when selected, enables POS video recording for the cameras assigned to a view pane. • **Select All:** Selects all of the OSD options. • **Background Color:** Opens a submenu with the following choices: – **Set Color:** Opens the Colors palette for selecting or creating a background color. – **Disable Background:** Disables a background color from being shown.
Resolution	Opens a submenu with the following choices: • 1024 x 768 • 1280 x 1024
Cycle Views Setup	Dwell time: Opens a submenu of dwell times with the following choices: • 2 Sec. • 5 Sec. • 10 Sec. • 30 Sec. • 60 Sec.
Index View	Opens the Event Index pane.
System Health View	Opens a submenu with the following choices: • Status View • Log View
Display Deinterlaced Image	Selects the deinterlace mode for enhancing the display of video images.
DirectX Draw	Improves performance by delegating graphics acceleration duties to your computer's video hardware instead of your computer's main processor.
Language	Opens a submenu with the following choices: • English (default) • French • German • Italian • Polish • Portuguese • Russian • Spanish

Export Menu

Table E describes the DX8100 Export menu commands.

Table E. Export Menu Commands

Command	Description
Interrupt Export	Immediately concludes an export process. If the Interrupt Export command is executed before the scheduled backup time, the system will save the backed up data until the time the Interrupt Export command is executed.
Cancel Export	Immediately cancels the export process and no backed data is retained.

Favorite Menu

Table F describes the DX8100 Menu commands.

Table F. Favorite Menu Commands

Command	Description
Add to Favorites	Opens the Add to Favorites dialog box, where you can create and store a favorite to a specified folder.
Organize Favorites	Opens the Organize Favorites dialog box, where you can do the following: • Create a new folder. • Rename the folders. • Move favorites to a specific folder. • Delete a favorite or favorite folder.

Help Menu

Table G describes the DX8100 Help menu commands.

Table G. DX8100 Help Menu Commands

Command	Description
DX8100 Help	Opens the DX8100 Help system.
About	Provides model and version information for the DX8100 application.

DX8100 TOOLBAR

This section describes the DX8100 toolbar. Table H describes the DX8100 toolbar buttons.

Table H. DX8100 Toolbar Buttons *(1 of 2)*

Button	Name	Description
	Live	Enters the display mode and opens the DX8100 main window, where live and playback video is displayed: • **Live mode:** Allows all users to view live video. • **Playback mode:** Allows users with playback access rights (Standard User by default) and higher to play back recorded video.
	Search	Enters the search mode and opens the Search window, providing access to search features. Users with Standard User access and higher are allowed to search video data using specific criteria.
	Setup	Enters the setup mode and opens the Setup dialog box to the Camera page (default view), and allows access to the other pages. Users with Power User access and higher are allowed to set up the features and options for the HVR.
	Export	Enters the export mode, where you configure the export options and parameters.
	Print	Enters the print mode, where you print the selected video image.
	Single Division	Displays one camera.
	4 Division	Displays four cameras simultaneously (quad display).
	9 Division	Displays nine cameras simultaneously.
	16 Division	Displays 16 cameras simultaneously.
	25 Division	Displays 25 images. Each HVR accommodates up to 32 cameras. You can display images from the local and remote DX8100 HVRs. Use the expansion unit to increase DX8108 from 8 to 24 camera inputs or the DX8116 from 16 to 32 camera inputs.
	36 Division	Displays 36 images. Each HVR accommodates up to 32 cameras. You can display images from the local and remote DX8100 HVRs.
	6, 10, 13 Division	Displays images as follows: • 6 Division (1+5): One larger and five smaller images • 10 Division (2+8): Two larger and eight smaller images • 13 Division (1+12: One larger and 12 smaller images

Table H. DX8100 Toolbar Buttons *(2 of 2)*

Button	Name	Description
	Cycle Views	Turns window cycling on and off. Automatically cycles through each view panel ensuring all cameras get displayed. Group permission to change the dwell time is assigned by the Administrator to the following groups: Restricted User Group, Standard User Group, and Power User Group. For information about cycle views setup, refer to *Automatically Cycling Through View Panels* on page 38.
	Full Screen	Selects a full screen view. The application window is expanded to occupy the entire monitor screen. Click the right mouse button to exit full-screen view. The full screen view is not available in the Thumbnail, POS, and Pixel search mode.
	Connection List	Opens the Connection List dialog box for adding sites to the Site Tree.

DISPLAYING THE DX8100 WINDOW FROM A PAGE

To display the DX8100 main window from a Setup dialog page:

- On the DX8100 toolbar, click the Live button .

DESCRIPTION OF OPERATING MODES

The DX8100 Series HVR has four primary operating modes: Live, Playback, Search, and Setup. Each operating mode is accessed by clicking its corresponding button on the toolbar.

Table I describes the DX8100 operating modes.

Table I. Operating Modes

Icon	Mode	Description
	Live	Enters the display mode and opens the DX8100 main window, where live and playback video is displayed: • **Live mode:** Allows all users to view live video. • **Playback mode:** Allows users with playback access rights to play back recorded video.
	Search	Enters the search mode and opens the Search window, providing access to search features. Allows users with playback access rights to search video data using specific criteria.
	Setup	Enters the setup mode and opens the Setup dialog box to the Camera setup page (default view), and allows access to the other setup pages. Users with Power User access and higher are allowed to set up the features and options for the HVR.

DISPLAYING VIDEO IN FULL SCREEN VIEW

The DX8100 allows full screen viewing of video data in the live, playback, and index search mode, providing more screen area to display video.

Displaying Live Video in Full Screen View

To display live video in full window view:

1. Select the live video mode. For information about working in the playback mode, refer to *Working in Live View Mode* on page 46.
2. Select a window division.
3. On the DX8100 toolbar, click the Full Screen button . Live video is displayed in full screen view.

To display the DX8100 main window from the full screen view:

- Right click in the DX8100 window.

Displaying Playback Video in Full Screen View

To display playback video in full screen view:

1. Select the playback mode. For information about working in the playback mode, refer to *Working in Playback Mode* on page 69.
2. Select a window division.
3. On the DX8100 toolbar, click the Full Screen button . Playback video is displayed in full screen view.

To display the DX8100 main window from the full screen view:

- Right click in the DX8100 window.

Displaying Index Search Video in Full Screen View

To display index search video in full screen view:

1. Select the index search mode. For information about working in the index search mode, refer to *Working in Playback Mode* on page 69.
2. Click the Reverse playback button to begin viewing video.
3. On the DX8100 toolbar, click the Full Screen button . Index search video is displayed in full screen view.

To display the DX8100 main window from the full screen view:

- Right click in the DX8100 window.

UNDERSTANDING VIEW PANES AND PANELS

This section describes the DX8100 viewing area. The viewing area is organized into panes and panels, much like a window contains panes. Video from each camera is displayed in its own viewing pane.

This section includes the following topics:

- *Working with View Panes and Panels*
- *Configuring View Panels* on page 36
- *Navigating View Panels* on page 36

WORKING WITH VIEW PANES AND PANELS

The DX8100 displays video from each camera in its own viewing pane.

- **View pane:** A view pane is a division of a view panel. Each view pane contains only a single camera channel. Up to 36 view panes can fit in a single view panel.
- **View panel:** A view panel is made up of the entire DX8100 viewing area. View panels are divided into multiple panes. Each panel can display from one to 36 individual cameras.

Figure 6 shows how the DX8100 viewing area is structured.

Figure 6. View Panes and Panel for 4-Division Display

Table J describes the view pane and panel as shown in Figure 6.

Table J. View Panes Panel

Item	Description
1	Shows a view pane for a four division display.
2	Shows the view panel, which contains view panes.

CONFIGURING VIEW PANELS

The DX8100 can display up to 36 cameras simultaneously in a single panel.

To select a view panel division:

1. On the DX8100 toolbar, click the Live button .
2. On the DX8100 toolbar, click a view panel division button.

   For information about the view division buttons, refer to *DX8100 Toolbar* on page 33.

NAVIGATING VIEW PANELS

This section describes how to move between the DX8100 view panes and panels. This section includes the following topics:

- *Navigating Between View Panels* on page 37
- *Expanding and Collapsing View Panes* on page 38
- *Manually Cycling Through Hidden View Panels* on page 38
- *Automatically Cycling Through View Panels* on page 38

Navigating Between View Panels

The DX8100 allows you to monitor up to 36 channels: each channel is assigned to one pane within the view panel. If the 36-division display format is selected, all 36 panes occupy one panel. However, for single, 4-division, 9-division, 16-division, and 25-division display formats, the DX8100 displays the panes in multiple panels. In this case, to view all of the panes, you must cycle through multiple panels to display hidden panels.

- **Channel:** As pertains to video, one DX8100 camera port (input). The term channel is sometimes used interchangeably with camera.
- **Camera:** One external video device, such as a Spectra III™, that provides input video to the DX8100 HVR.

For example, if you select the single-division display format, one channel (video pane) fills the entire panel.

- The pane and panel represent the same amount of viewing area.
- In this case, there will be an additional 31 hidden panels (one pane equals one panel) through which to cycle.

Similarly, if you select the 4-division display format:

- Four panes (one camera/channel per pane) are displayed in the panel.
- In this case, 7 hidden panels (four cameras/channels per panel, or 4 x 7 = 28 panels), remain to be displayed.

Figure 7 shows how the DX8100 cycles through view panels, depending on the display format.

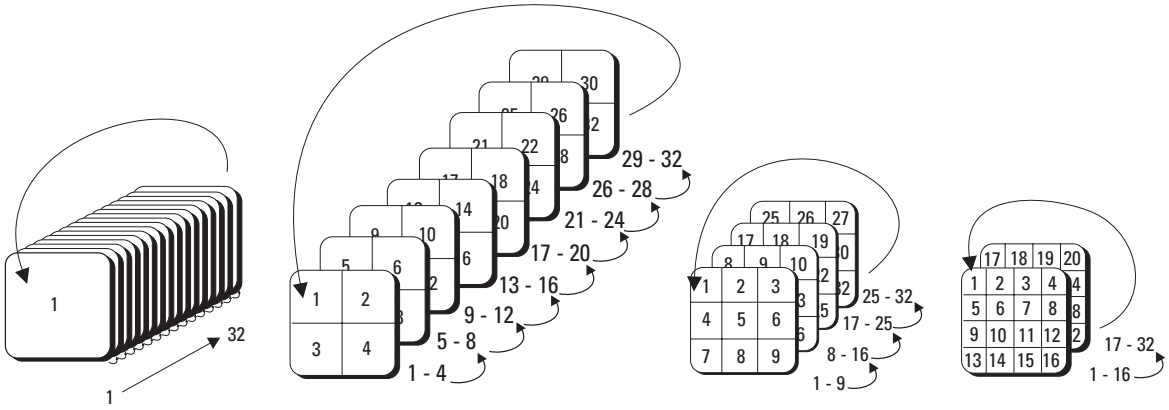

Figure 7. Example of Single, 4, 9, and 16 Division View Panels

Table K describes how the DX8100 view panes and panels are organized.

Table K. How View Panels are Organized

Display Type	Grouping	Number of View Panes	Number of View Panels
Single	1/32	1	32
4 Division	1/8	4	8
9 Division	1/4	9	4
16 Division	1/2	16	2
25 Division	1/2	25	2
36 Division	1/1	36	1
6, 10, 13 Division: • 1+5 Division • 2+8 Division • 1+12 Division	 1/6 1/4 1/4	 6 10 13	 6 4 4

Pressing one of the view panel division buttons sets the number of visible channels displayed in the panel. Figure 8 shows the view panel identifier.

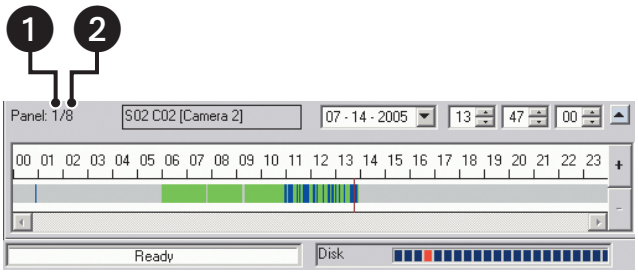

Figure 8. View Panel Identifier

Table L describes how the DX8100 view panes and panels shown in Figure 8 are organized.

Table L. View Panes and Panel

Item	Description
1	Indicates the panel number being viewed.
2	Indicates the total number of panel pages available.

Expanding and Collapsing View Panes

To expand a view pane to fill the entire panel:

- Double-click a view pane.

  The view fills the entire view panel.

To collapse a view pane:

- Double-click the expanded view pane.

  The view pane returns to its default size.

Manually Cycling Through Hidden View Panels

To manually cycle through hidden view panels:

- On the DX8100 toolbar, click one of the panel division buttons.

  The view sequences through the view panels.

For example, when you repeatedly click a 4 Division display format button , the DX8100 cycles through each of the eight available view panels.

Automatically Cycling Through View Panels

The DX8100 provides an automatic cycle feature that (when selected) automatically cycles through each view panel, ensuring all cameras get displayed. Group permission to change the dwell time is assigned by the Administrator to the following groups: Restricted User Group, Standard User Group, and Power User Group.

NOTE: When viewing analog and IP cameras in DX8100 Client application, the DX8100 only supports the automatic cycle mode when video is displayed in the Single division view.

This section describes how to configure the DX8100 to automatically cycle through camera views and includes the following sections:

- *Starting an Automatic Cycle View Mode* on page 39
- *Viewing Analog and IP Camera Video in the Automatic Cycle View Mode*
- *Stopping an Automatic Cycle View Sequence* on page 39
- *Selecting User Groups to Set the Cycle View Dwell Time* on page 39
- *Selecting the Cycle View Dwell Time* on page 39

Starting an Automatic Cycle View Mode

To start the automatic cycle view mode:

- On the DX8100 toolbar, click the Cycle Views button .

  The Cycle Views icon turns blue, indicating that the DX8100 is in the automatic cycle view mode. The system will cycle through each panel, displaying each panel for the configured cycle view dwell time.

Viewing Analog and IP Camera Video in the Automatic Cycle View Mode

1. On the DX8100 toolbar, click the Single division button .
2. In the Site Tree, click and drag the site icon onto the single view pane. All of the cameras in the site are assigned to view panes.
3. On the DX8100 toolbar, click the Cycle Views button .

Stopping an Automatic Cycle View Sequence

To stop the automatic cycle view mode:

- On the DX8100 toolbar, click the Cycle Views button .

  The DX8100 stops the automatic cycle view mode.

Selecting User Groups to Set the Cycle View Dwell Time

The DX8100 allows the Administrator to control which user group can change the cycle view dwell time. In this case, anyone that belongs to a selected user group can change the cycle view dwell time.

To select a user group to have permission to change the cycle view dwell time:

1. On the DX8100 toolbar, click the Live button .
2. From the DX8100 menu bar, choose View > Cycle Views Setup > Dwell time change.
3. From the Dwell time change submenu, choose a user group.

Selecting the Cycle View Dwell Time

To configure the cycle period:

1. On the DX8100 toolbar, click the Live button .
2. From the DX8100 menu bar, choose View > Cycle Views Setup > Dwell time.
3. From the Dwell time submenu, choose a time period

The DX8100 supports up to nine different channel mapping views. Selected cameras from the Site Tree can be displayed on the extended monitor and can be assigned to multiple views. Each view is set up independently; removing a camera from one view does not remove it from another.

To set up channel mapping for the extended monitor (VGA or composite):

1. On the DX8100 toolbar, click the Channel Mapping button . The setup page opens to the "Channel Mapping for Extended Monitor" tab. You can also access this page from the Setup dialog box by clicking the Ext. Monitor icon.

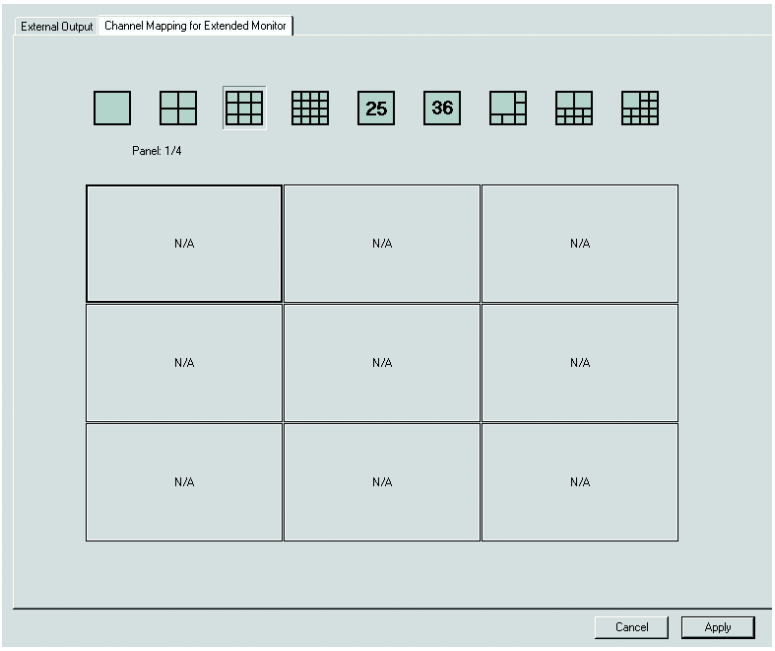

Figure 9. Channel Mapping for Extended Monitor Page_C2630MB_0007.tif

2. To assign a camera to a pane, click and drag the camera from the Site Tree onto a pane.

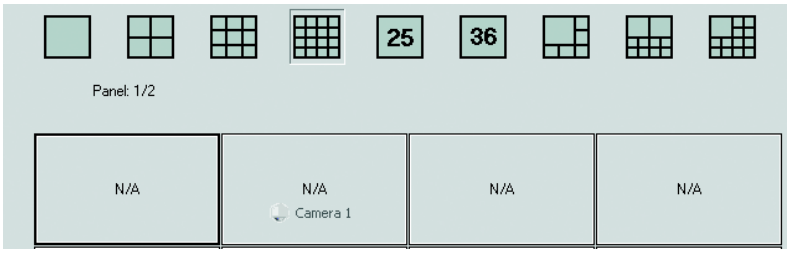

Figure 10. Assigning a Camera to a Pane_C2630MB_0008.tif

3. Repeat step 2 to assign other cameras to the view.
4. To move a camera from one pane to another pane, right-click and drag the camera to the new pane. If the new pane was empty, the N/A moves from the new pane to the old pane. If a camera was already assigned to the new pane, the two cameras switch places.

WORKING WITH THE SITE TREE

The Site Tree provides access to DX8100 resources, such as cameras, alarm inputs, and relay outputs. Objects can be selected by clicking the left mouse button once, and then linked by dragging and dropping the icon into a view pane or another Site Tree item. The Site Tree information reflects the current DX8100 server configuration.

Figure 11 shows the Site Tree.

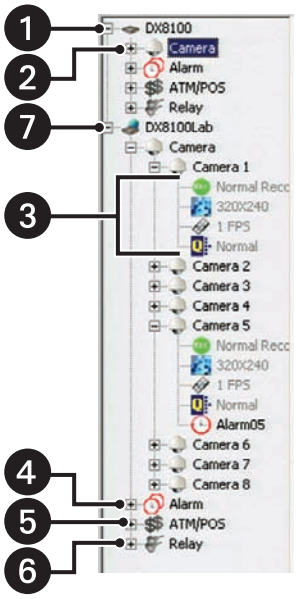

Figure 11. Site Tree Parts

Table M describes the Site Tree parts.

Table M. Site Tree Parts

Item	Part	Description
❶	Name	**Site:** Expands and collapses the DX8100 site. Right-clicking the site name opens a shortcut menu that provides the following commands: • User Log-In: opens the User Log-In dialog box, where you enter your user name and password to log into the DX8100 site. • User Log-Out: Logs you out of the DX8100 site. • Connect • Disconnect
❷		**Camera:** Expands and collapses the Camera tree.
❸		**Channel information:** Displays icons that represent the configuration of the camera: • Recording mode • Recording resolution • Recording frame rate • Recording image quality
❹		**Alarm:** Expands and collapses the Alarm tree.
❺		**ATM/POS:** Expands and collapses the ATM/POS tree.
❻		**Relay:** Expands and collapses the Relay tree. Right-clicking a relay opens a shortcut menu that provides the following commands: • ON: Allows you to turn on the relay. • OFF: Allows you to turn off the relay.
❼		**Remote site:** Expands and collapses the remote DX8100 site. Right-clicking the remote site name opens a shortcut menu that provides the following commands: • User Log-In: Opens the User Log-In dialog box, where you enter your user name and password to log into the remote DX8100 site. • User Log-Out: Logs you out of the remote DX8100 site. • Connect: Allows you to connect to the remote site. • Disconnect: Allows you to disconnect from the remote site.

This section describes how to work with the Site Tree and includes the following topics:

- *Assigning Cameras to View Panes* on page 43
- *Setting Up Links* on page 43
- *Removing Links* on page 44

ASSIGNING CAMERAS TO VIEW PANES

The DX8100 provides view panes that are organized into view panels. The DX8100 includes 36 view panels that can display cameras from up to five connected HVR sites. For information about view panels, refer to *Working with View Panes and Panels* on page 35.

The DX8100 Series HVR supports triplex operation. Triplex operation means that the DX8100 will continuously record, even while users view simultaneous live and playback video or modify the system setup.

To assign a single camera to a view pane:

1. On the DX8100 toolbar, click the Live button .
2. In the Site Tree, click the plus sign (+) next to to expand the tree (if necessary).
3. Do one of the following:
   - To assign a single camera to a view pane, drag the camera from the Site Tree onto a view pane.
   - To assign all cameras from a single site to the view panes, drag onto a single view pane. (The default arrangement of cameras is Camera1, Camera2, Camera3; from left to right, top to bottom.)
4. Repeat the process in step 3 for up to 36 cameras and up to five HVR sites.

SETTING UP LINKS

The DX8100 allows you to set up links in various configurations:

- You can link multiple alarms and relays to a single camera.
- You can link a single alarm or relay to multiple cameras.
- You can link alarms and relays to cameras by dragging them onto individual camera view panes.
- You can also manually turn a relay on and off from the Site Tree.

This section describes how to set up links and includes the following sections:

- *Manually Turning On and Off a Relay* on page 43
- *Linking Alarm Inputs to a Camera* on page 43
- *Linking a Relay Output to a Camera* on page 44
- *Linking Relay Outputs to Alarm Inputs* on page 44

Manually Turning On and Off a Relay

To manually turn on and off a relay:

1. Right click a relay. The shortcut menu opens.
2. Click ON to turn on the relay; click OFF to turn off the relay.

Linking Alarm Inputs to a Camera

The DX8100 allows you to link alarm inputs to a camera.

- You can link multiple alarm inputs to a single camera.
- You can also link a single alarm input to multiple cameras.

The DX8100 allows you to link alarms to cameras by dragging them onto individual camera view panes or onto cameras listed in the Site Tree.

To link an alarm input to a camera:

1. On the DX8100 toolbar, click the Live button .
2. In the Site Tree, click the plus sign (+) next to the camera to which you want to link alarms.
3. Click the plus sign (+) next to the to see the list of alarm inputs.
4. Drag an alarm input onto a camera pane or a camera listed in the Site Tree.

Linking a Relay Output to a Camera

The DX8100 allows you to link relays to a camera.

- You can link multiple relays a single camera.
- You can also link a single relay to multiple cameras.

The DX8100 allows you to link relays to cameras by dragging them onto individual camera view panes or onto cameras listed in the Site Tree.

To link a relay output to a camera:

1. On the DX8100 toolbar, click the Live button .
2. In the Site Tree, click the plus sign (+) next to the camera to which you want to link relays.
3. Click the plus sign (+) next to to see the list of relay outputs.
4. Drag a relay onto a camera pane or a camera listed in the Site Tree.

Linking Relay Outputs to Alarm Inputs

To link a relay output to an alarm input:

1. On the DX8100 toolbar, click the Live button .
2. In the Site Tree, click the plus sign (+) next to to expand the Alarm tree if needed.

   Relays can also be linked to cameras and alarms on the Link settings page. For more information, refer to *Configuring Basic Relay and Alarm Settings* on page 128.
3. Click the plus sign (+) next to to expand the Relay tree if needed.
4. Drag a relay output onto an alarm input in the Site Tree.

REMOVING LINKS

This section describes how to remove links and includes the following sections:

- *Removing a Linked Alarm Input from a Camera* on page 44
- *Removing a Linked Relay Output from a Camera* on page 44
- *Removing a Linked Relay Output from an Alarm Input* on page 45

Removing a Linked Alarm Input from a Camera

To remove an alarm link from a camera:

1. On the DX8100 toolbar, click the Live button .
2. In the Site Tree, click the plus sign (+) next to the camera from which you want to remove an alarm input.
3. Left click and drag the alarm outside the Site Tree panel, and then release the mouse button.
4. Repeat the above process for each alarm you want to remove.

Removing a Linked Relay Output from a Camera

To remove a relay link from a camera:

1. On the DX8100 toolbar, click the Live button .
2. In the Site Tree, click the plus sign (+) next to the camera from which you want to remove the relay output.
3. Left click and drag the relay outside the Site Tree panel to the DX8100 toolbar or panel (above or below the Site Tree panel), and then release the mouse button.
4. Repeat the above process for each relay you want to remove.

Removing a Linked Relay Output from an Alarm Input

To unlink a relay from an alarm:

1. On the DX8100 toolbar, click the Live button .
2. In the Site Tree, click the plus sign (+) next to the alarm input from which you want to remove the relay output.
3. Left click and drag the relay outside the Site Tree panel, and then release the mouse button.

Repeat the above process for each relay you want to remove.

Working in Live View Mode

This section describes how to use the DX8100 to view and record live video. All users can view live video from the main window. Users with PTZ access rights (Standard User by default) and higher can operate the on-screen PTZ controls. Live video can also be displayed in full screen view. For information about displaying playback video in full screen view, refer to *Displaying Live Video in Full Screen View* on page 34.

The DX8100 displays live video based on one of the following scenarios:

- **Capture card displays live video:** The capture card is used to display live video on the main VGA monitor. For each channel, live video is displayed on the VGA monitor at the maximum recording rate. For example, channel 1 is set to 2CIF recording resolution and the actual record rate is 1 image per second (ips). In this case, live video for channel 1 is displayed at 15 ips. Additionally, the capture card provides a BNC analog output of the live video image. The analog image is the same as the image displayed on the VGA monitor. The DX8100 External Monitor option allows you to configure how analog video is displayed on an external monitor connected to the capture card. For information about the External Monitor feature, refer to *External Monitor Setup* on page 178.
- **MUX card displays real-time video:** If the DX8100 is equipped with the MUX option, real-time video from the MUX card(s) is displayed on the main VGA monitor at 30 ips. Real-time video is displayed for all the channels regardless of the recording resolution.
  - Additionally, the MUX Card provides a BNC analog output of the real-time video image. The analog image is the same as the image displayed on the VGA monitor. The analog output does not contain any display icons, labels, or text, but video is displayed on the analog monitor in the same division mode as is displayed on the VGA monitor.
  - One operational difference is that the MUX stops the display of real-time video if the search mode is active for one channel. In this case, the capture card(s) are used to display the video.

When installing the MUX card option, ensure that the MUX Card matches the capture card channel capacity as follows:

- If an 8-channel capture card is installed, the DX8108-MUX option is required. The DX8124 model HVR has two capture cards installed: an 8-channel and a 16-channel capture card. In this case, the DX8108-MUX and DX8116-MUX option are required.
- If a 16-channel capture card is installed, the DX8116-MUX option is required. The DX8132 model HVR has two 16-channel capture cards installed. In this case, two DX8116-MUX options are required.

To view live video in the DX8100 main window:

- On the DX8100 toolbar, click Live.

This section includes the following topics:

- *Assigning and Removing Cameras from View Panes*
- *Live View On-Screen Display (OSD)* on page 50
- *Customizing the On-Screen Display (OSD)* on page 51

ASSIGNING AND REMOVING CAMERAS FROM VIEW PANES

The DX8100 allows you to quickly move cameras to and remove cameras from a view pane.

To assign a camera to the view pane:

1. Drag a camera from the Site Tree onto a view pane.
2. Repeat the process in step 1 for up to 36 cameras and up to five different DX8100 sites.

To remove a camera from a view pane:

- Right click in the view pane and drag the camera to the Site Tree pane.

For information about the DX8100 view pane and panels, refer to the following topics:

- *Working with View Panes and Panels* on page 35
- *Configuring View Panels* on page 36
- *Navigating View Panels* on page 36

SETTING UP FAVORITES

The DX8100 Favorites menu allows you to organize and save camera views. For example, you might want to display camera views that show the delivery gate entrance for buildings 1, 4, 7, and 12 during the hours of 06:00 to 07:30 and another camera view that displays the front lobby of buildings 1 through 16 at 08:00.

This section describes the following topics:

- *Adding a Camera View to Favorites*
- *Organizing Favorites in Folders*

ADDING A CAMERA VIEW TO FAVORITES

You can create multiple camera views to monitor various site locations. For example, you could create a folder named Day Shift for displaying camera views during normal working hours and Night Shift for displaying various camera views after work and during the night hours. For information about organizing favorites into folders, refer to *Organizing Favorites in Folders*.

To add a camera view to favorites:

1. From the DX8100 menu bar, click Favorite > Add to Favorites.

   The Add to Favorites dialog box opens.

2. Enter the camera view name in the Name box.

3. Click OK. The camera view is added to the favorites, and the Add to Favorites dialog box closes.

4. To view the new entry, from the DX8100 menu bar, click Favorites. The new entry appears in the Favorites list.

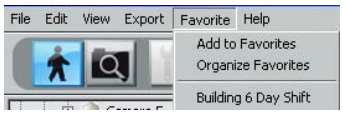

Figure 12. Favorites Menu List

ORGANIZING FAVORITES IN FOLDERS

As your list of favorites grows, you can keep them organized by creating folders. You can organize your camera views by site name, user name, and so forth. For example, you could create a folder named Day Shift for displaying camera views for the day shift.

Creating a Favorites Folder

To create a favorites folder:

1. From the DX8100 menu bar, click Favorite > Organize Favorites.

   The Organize Favorites dialog box opens.

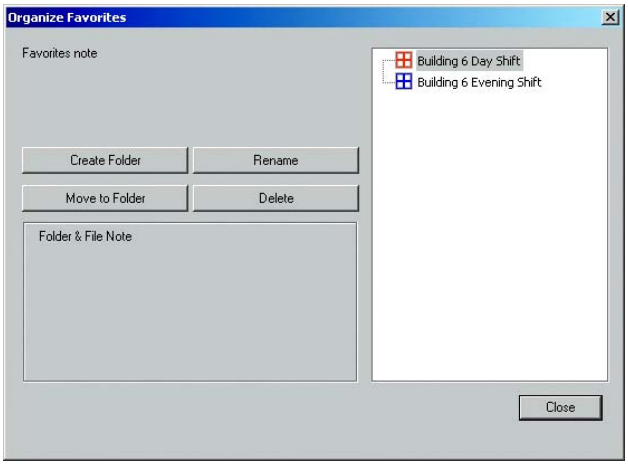

Figure 13. Organize Favorites Dialog Box

2. Click Create Folder. A new folder is added to the favorites area.
3. To name the folder, do one of the following:
   a. If the new folder name is already selected, type the name of the folder.

      or

   b. If the new folder name is not selected:
      (1) Click the new folder.
      (2) Type the name of the folder.

   The new folder is listed in the Favorites area of the Organize Favorites dialog box and in the Favorites menu.

Moving Existing Favorites to a Folder

To move an existing favorite to a folder:

1. Create a favorites folder (refer to *Creating a Favorites Folder* on page 48).
2. From the DX8100 menu bar, click Favorite > Organize Favorites.

   The Organize Favorites dialog box opens. A list of the current favorites and folders is displayed in the favorites area.

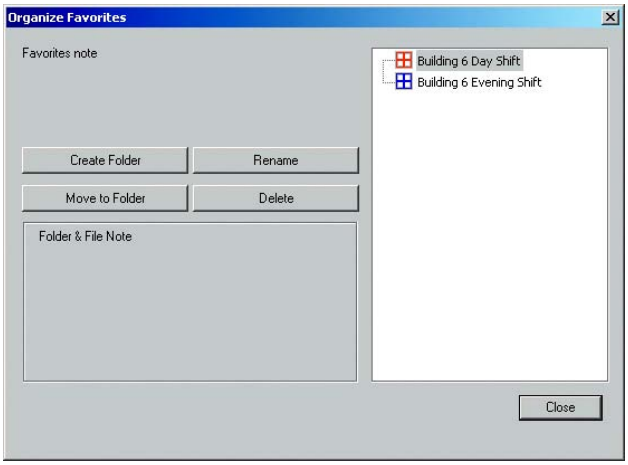

Figure 14. Organize Favorites Dialog Box and List of Favorites/Folders

3. In the favorites area, click a favorite.
4. Click Move to Folder.

   The Move to Folder dialog box opens.

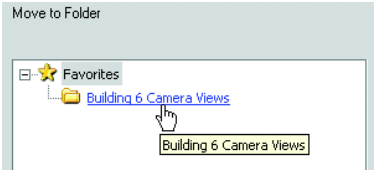

Figure 15. Move to Folders Dialog Box

5. Select a destination folder.
6. Click OK.

   The favorite is moved under the destination folder.

LIVE VIEW ON-SCREEN DISPLAY (OSD)

The DX8100's OSD consists of camera and site information that is superimposed on each view pane. Each display item in the OSD can be customized for both live and playback viewing.

Figure 16 shows the parts of the Live View OSD pane.

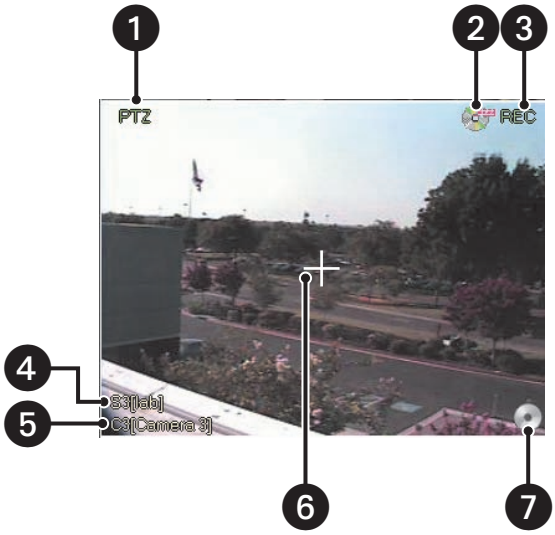

Figure 16. Live View OSD Pane

Table N describes the parts of the Live View OSD pane.

Table N. Parts of the Live View OSD Pane

Item	Part	Description
1	PTZ	Indicates that the PTZ control is enabled.
2		Indicates that audio recording is enabled. The DX8100 compresses audio data to save space. In this case, recorded audio may not be of the same quality as live audio.
3	REC	Indicates camera recording mode and status. A blinking REC indicator signifies event recording. • Green indicates normal recording. • Blue indicates motion recording. • Red indicates alarm recording. • Yellow indicates ATM/POS recording. • Purple indicates video loss recording. • Black on white background indicates instant recording.
4	Site Designator	Lists the number and name of the current site.
5	Camera Designator	Lists the number and name of the current camera.
6	On-Screen PTZ Control	Facilitates mouse control of PTZ functions. Refer to *Operating the On-Screen PTZ Controls* on page 54.
7	Instant Recording	Starts/stops instant recording if enabled.

CUSTOMIZING THE ON-SCREEN DISPLAY (OSD)

Users with Guest User access and higher can add and delete on-screen display items.

To customize the on-screen display:

1. From the DX8100 menu bar, choose View > OSD and then select the items you want to add to or delete from the OSD. Items include
   - Site Name
   - Camera Name
   - Video Recording
   - Audio Recording
   - PTZ
   - Instant Recording
   - POS
   - Select All (displays all items in each pane)
   - Background Color

Figure 17. Client OSD Menu Options

2. Do one of the following:
   - From the DX8100 menu bar, choose View > OSD > Background Color > Set Color to add a contrasting background field behind each OSD display item.
   - From the DX8100 menu bar, choose View > OSD > Background Color > Disable Background to remove background field.

INSTANT RECORDING

This section describes the instant recording mode. Users with Power User access and higher can configure the DX8100 for recording video both instantly and in accordance with a preset schedule. The Instant Recording mode is enabled from the Schedule page. Instant recording is activated from the main window by double-clicking the Instant Recording icon.

If the HVR is not in the normal recording mode, you can use the instant recording mode to manually start and stop a video recording session instantly. For information about adding the Instant Recording icon to the OSD, refer to *Adding Instant Recording to OSD* on page 52.

This section includes the following topics:

- *Enabling and Disabling Instant Recording*
- *Adding Instant Recording to OSD* on page 52
- *Starting and Stopping Instant Recording* on page 52

ENABLING AND DISABLING INSTANT RECORDING

This section describes how to enable and disable the instant recording mode and includes the following topics:

- *Enabling Instant Recording*
- *Disabling Instant Recording*

For more information about instant recording, refer to *Instant Recording* on page 51.

Enabling Instant Recording

To enable the Instant Recording mode:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. In the Setup dialog box, click the Schedule button .
3. In the Camera Settings Panel, from the Instant Recording drop-down box, select Enable.

Disabling Instant Recording

To disable the Instant Recording mode:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. In the Setup dialog box, click the Schedule button .
3. In the Camera Settings Panel, from the Instant Recording drop-down box, select Disable.

ADDING INSTANT RECORDING TO OSD

To add the Instant Recording icon to the OSD:

- From the DX8100 menu bar, choose View > OSD > Instant Recording.

  The Instant Record icon is displayed in the lower-right corner of the view pane.

STARTING AND STOPPING INSTANT RECORDING

The Instant Recording mode must first be enabled from the Schedule page and the Instant Recording icon must be visible in the lower-right corner of the view pane. For more information about DX8100 instant recording, refer to *Instant Recording* on page 51. For information about OSD, refer to *Live View On-Screen Display (OSD)* on page 50.

Figure 18 shows the Record and Instant Record icons.

Figure 18. Activating Instant Recording

Table O describes the recording indicators.

Table O. Recording Indicators

Item	Icon	Description
❶	REC	Indicates camera recording mode and status. A blinking REC indicator signifies event recording. • Green indicates normal recording. • Blue indicates motion recording. • Red indicates alarm recording. • Yellow indicates ATM/POS recording. • Purple indicates video loss recording. • Black on white background indicates instant recording.
❷	Instant Recording	Starts/stops instant recording if enabled. Changes from silver to blue to indicate that instant recording is activated.

This section describes how to start and stop instant recording and includes the following topics:

- *Starting Instant Recording*
- *Stopping Instant Recording*

Starting Instant Recording

To start instant recording:

- Double-click the Instant Recording icon located in the lower-right corner of the view pane.
  - The Instant Recording icon changes from silver to blue, indicating that instant recording is activated.
  - If video recording is enabled, verify that REC is black and highlighted white. If video recording is not enabled, REC is not displayed or will show another recording mode color.

Stopping Instant Recording

To deactivate instant recording:

- In the view pane, double-click the Instant Recording icon.

  The instant recording icon changes from blue to silver, indicating that instant recording is de-activated.

LISTENING TO LIVE AUDIO AT THE CLIENT

1. On the DX8100 toolbar, click the Live button .
2. Drag a camera that is configured to record live audio from the Site Tree onto a view pane.

   NOTE: Live audio is not supported for IP cameras.
3. On the playback control, click the Mute on/off button . The sound feature is enabled.
4. Verify that you can hear live audio from an audio monitoring device connected to the remote computer's audio output.

For information about using the PTZ control while listening to live audio, refer to *Working with the Client PTZ Control and Listening to Live Audio* on page 55.

OPERATING THE ON-SCREEN PTZ CONTROLS

Users with PTZ access rights (Standard User by default) and higher can operate PTZ lens functions of cameras that support such features. PTZ functions can be controlled on the screen in Live mode using the mouse.

PTZ control is available for cameras that support PTZ functions using Pelco's P, D, or Coaxitron® protocols. It is also available for supported third-party dome cameras. For more information about configuring PTZ ports, refer to Setting Up COM1 Port Properties in the DX8100 server Help system or the Operation/Configuration manual.

In addition, the PTZ option must be enabled and a protocol must be assigned to the camera channel. For more information, refer to Camera Setup in the DX8100 server Help system or the Operation/Configuration manual.

This section describes how to use the PTZ controls and includes the following topics:

- *Operating the PTZ Controls*
- *Working with the Client PTZ Control and Listening to Live Audio* on page 55
- *Adjusting the Camera Lens* on page 55
- *Adjusting the Camera Zoom* on page 55
- *Using Keyboard Shortcuts to Operate PTZ and Lens Functions* on page 56

OPERATING THE PTZ CONTROLS

To operate the on-screen PTZ controls:

1. On the DX8100 toolbar, click the Live button .
2. Select a PTZ-enabled camera from the Site Tree.
3. Place the mouse pointer in the middle of the camera's view pane. The mouse pointer will change to a black cross when on-screen PTZ control is available.

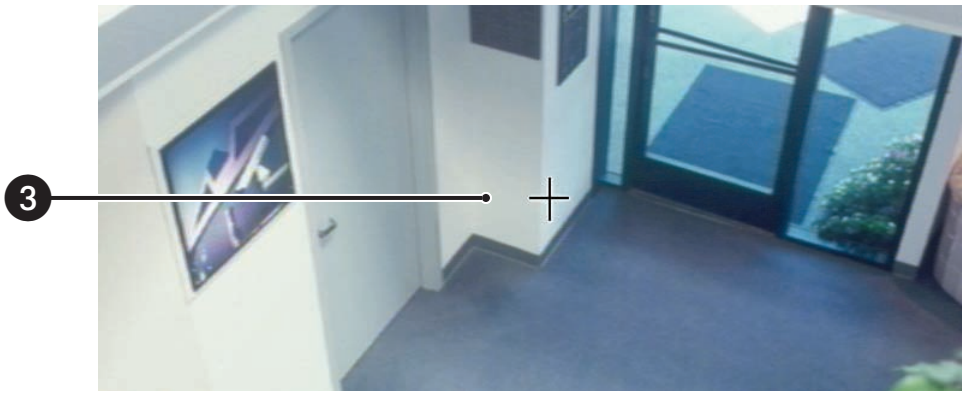

Figure 19. On-Screen PTZ Control

4. Click and hold the left mouse button, and then drag the mouse pointer in the direction you want to move the camera. The display changes to an arrow, indicating the direction of the mouse.

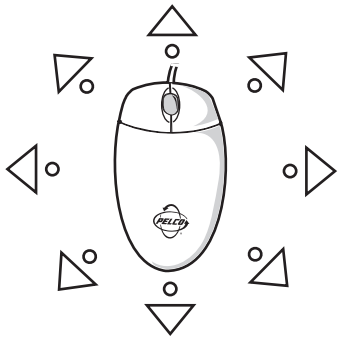

Figure 20. On-Screen PTZ Movement

5. Release the mouse button when you have repositioned the camera to the desired location.

WORKING WITH THE CLIENT PTZ CONTROL AND LISTENING TO LIVE AUDIO

NOTE: Using the remote client's PTZ control to operate an audio-enabled camera will interrupt the ability to hear live audio from that camera.

To resume hearing audio:

1. Click an area of the camera pane (other than the center area that activates the PTZ black cross). Live audio is audible at the client in about three seconds.

ADJUSTING THE CAMERA LENS

To adjust camera lens features:

- Click the plus (+) or minus (-) button next to the zoom, focus, and iris function on the keypad.

Figure 21. PTZ Keypad with Camera Lens Controls

ADJUSTING THE CAMERA ZOOM

To adjust camera zoom using the mouse:

- Rotate the mouse wheel forward to zoom in and backward to zoom out.

Figure 22 shows how to operate the mouse to zoom in and out. You can also use keyboard shortcuts to operate the lens features of cameras such as Pelco's Spectra III. For more information about using keyboard shortcuts, refer to *Using Keyboard Shortcuts to Operate PTZ and Lens Functions* on page 56.

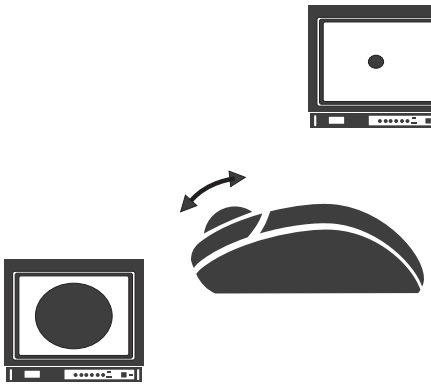

Figure 22. Mouse Wheel Zoom

USING KEYBOARD SHORTCUTS TO OPERATE PTZ AND LENS FUNCTIONS

Users with PTZ access rights (Standard User by default) and higher can use a computer keyboard to operate PTZ and lens functions of cameras that support such features. PTZ and lens functions can be controlled in Live mode using the keyboard.

Table P describes the keyboard buttons that you use to control PTZ and lens functions.

Table P. Standard Keyboard Functions for Controlling PTZ and Lens Functions

Key	Description
Insert and Delete	These keys provide the following functionality: • **On-screen display, preset and pattern modes:** Insert increases focus and Delete decreases focus, performing the same actions as the focus control on the PTZ keypad. • **Remote camera programming mode:** Insert and Delete perform the same actions as the PTZ keypad focus (+) and (-) buttons, navigating up and down the camera menu choices.
Home and End	These keys provide the following functionality: • **On-screen display, preset and pattern modes:** The Home key opens the iris and the End key closes the iris, performing the same actions as the PTZ keypad iris (+) and (-) buttons. • **Remote camera programming mode:** The Home key selects an option from the camera's on-screen menu. The End key cancels an option or exit a menu. These keys perform the same actions as the PTZ keypad iris (+) and (-) buttons.
Page Up and Page Down	These keys provide the same functionality in the on-screen display and the preset and pattern modes as the PTZ keypad zoom (+) and (-) buttons. Page Up zooms in; Page Down zooms out.
Up and Down Arrows	These keys provide the following functionality: • **On-screen display, preset and pattern modes:** The up arrow key raises the camera and the down arrow key lowers the camera. The keys perform the same actions as the mouse to move the camera. • **Remote camera programming mode:** The arrow keys navigate up and down the camera menu choices. The keys perform the same actions as the PTZ keypad focus (+) and (-) buttons.
Left and Right Arrows	These keys provide the same actions as the mouse for moving the camera. The left arrow key pans the camera to the left and the right arrow key pans the camera to the right.
+ and -	These keys perform similar actions as using the mouse to change the speed of camera movement. When pressed once, the plus (+) key increases the camera's pan/tilt speed; when pressed once, the minus (-) key decreases the pan/tilt speed. Each time the plus (+) key is pressed the pan/tilt speed is increased toward maximum speed; each time the minus (-) key is pressed, the pan/tilt speed is decreased toward minimum speed.

To use the keyboard (+) and (-) keys to control camera pan/tilt speed:

1. On the DX8100 toolbar, click the Live button .
2. Select a PTZ-enabled camera from the Site Tree.
3. Click the mouse pointer in the camera's view panel.
4. Press and hold the up/down and left/right arrows to pan/tilt the camera.
5. Press the plus (+) key one or more times to increase the pan/tilt speed. Press the minus (-) key one or more times to decrease the pan/tilt speed.

PTZ PRESETS

A preset is a user-defined camera position using PTZ and focus commands the (camera's auto focus option must be turned off). Only cameras that support positioning and programming using D, P, Coaxitron, or supported third-party protocols can use this feature. The DX8100 Series HVR can address up to 150 PTZ presets (1-150). Preset 95 is reserved for remote camera setup, and preset 99 is reserved for camera autoscan mode.

From the DX8100 menu bar, choose View > Extended View.The following PTZ operating guidelines must be observed:

- To program or clear presets, preset tours, and patterns, the Set button must be engaged.
- To activate presets, tours, and patterns, the Set button must be disengaged.

This section describes how to program, activate, and clear presets and includes the following topics:

- *Programming a Preset*
- *Activating a Preset* on page 58
- *Clearing a Preset* on page 59

PROGRAMMING A PRESET

This section describes how to program a preset. The following PTZ operating guidelines apply:

- Clicking the Set button places DX8100 in PTZ programming mode.
- While in PTZ programming mode, multiple presets can be programmed until the Set button is pressed again.

To program a PTZ preset:

1. On the DX8100 toolbar, click the Live button .
2. Drag a camera from the Site Tree onto a view panel.
3. On the PTZ keypad, click the Set button .
4. Using the on-screen PTZ controls and PTZ keypad, move the camera to the desired position and adjust the zoom setting.

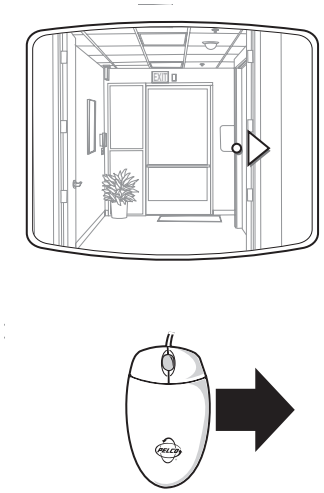

Figure 23. Creating a Preset

5. Using the PTZ keypad, select a number for the new preset (for example, select 1).
6. Click the Preset button [Preset] to store the preset in the selected memory location.
7. Repeat steps 4-6 for each preset you want to program.
8. Click the Set button [Set] again to exit programming mode.

Figure 24. Programming a Preset

ACTIVATING A PRESET

Double- and triple-digit presets can be set or activated by pressing the first digit and then the second digit sequentially. For example, preset 20 can be selected by clicking the number 2 and then the 0 (zero) on the PTZ keypad.

To activate a preset:

1. On the PTZ keypad, click a preset number (1-150) on the keypad.
2. Click the Preset button [Preset] to activate preset. The camera repositions to the new preset.

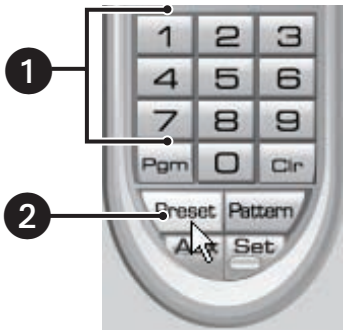

Figure 25. Activating a Preset

CLEARING A PRESET

To clear a preset:

1. On the PTZ keypad, click the Set button [Set] to enter programming mode.
2. Click the number of the preset you want to clear from the PTZ keypad.
3. Click the Clr button [Clr].
4. Repeat steps 2 and 3 to clear multiple presets.
5. Click the Set button [Set] to exit programming mode.

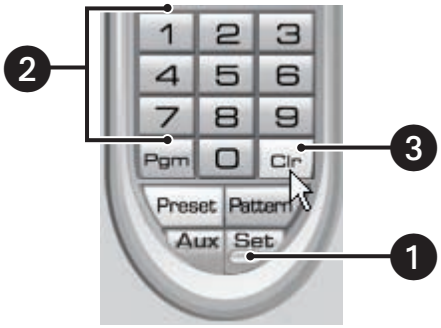

Figure 26. Clearing a Preset

PTZ PATTERNS

A pattern is a user-defined, viewable camera path with a definite beginning and end. Patterns are made up of a sequence of standard pan, tilt and lens commands. Patterns are stored in the internal memory of the PTZ device, such as a Spectra® dome, that is connected to the DX8100. The Spectra III supports one pattern and the Spectra III SE supports up to four unique PTZ patterns. Depending on the type and configuration of the PTZ device, the DX8100 can address up to four unique PTZ patterns. Once defined, a pattern can be activated with a series of on-screen commands. A pattern will run continuously until it is deactivated.

Only PTZ-enabled cameras that support pattern programming through D, P, Coaxitron, or supported third-party protocols can use this feature.

This section describes how to program, activate, and clear patterns, and access the programming features of remote cameras. This section includes the following topics:

- *Programming a Pattern*
- *Activating a Pattern* on page 60
- *Clearing a Pattern* on page 60
- *Accessing Programming Features of Remote Cameras* on page 61

PROGRAMMING A PATTERN

This section describes how to program a pattern. Certain PTZ devices, such as Pelco's Spectra series domes, will display an on-screen message stating the amount of remaining memory available for pattern programming.

Start Programming a Pattern

To program a pattern:

1. On the PTZ keypad toolbar, click the Live button [ ].
2. Drag a camera from the Site Tree onto a view panel.
3. On the PTZ keypad, click the Set button [Set] to enter programming mode.
4. Using the PTZ keypad, select a number for the pattern (1-4).
5. Click the Pattern button [Pattern].

6. Move the camera through a series of movements using the on-screen PTZ and focus controls.

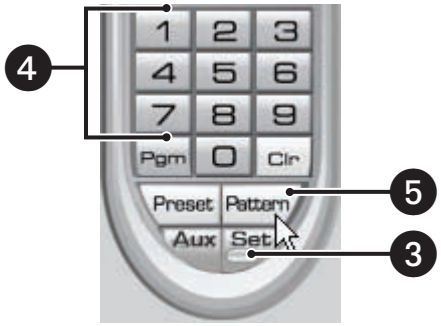

Figure 27. Programming a Pattern

Stop Programming a Pattern

To stop programming a pattern:

1. On the PTZ keypad, click the Pattern button [Pattern].
2. Click the Set button [Set].

ACTIVATING A PATTERN

When activated, a pattern will repeat indefinitely until it is cleared, another pattern is set, or the on-screen PTZ control is moved.

To activate a pattern:

1. On the PTZ keypad, click a pattern number (1-4) on the keypad.
2. Click the Pattern button [Pattern].

Figure 28. Activating a Pattern

CLEARING A PATTERN

To clear a pattern:

1. On the PTZ keypad, click Set button [Set] to enter programming mode.
2. Select a pattern number (1-4) on the keypad.
3. Click the Pattern button [Pattern].
4. Click the Clr button [Clr].
5. Click the Pattern [Pattern] again.

6. Click the Set button [Set] again to exit programming mode.

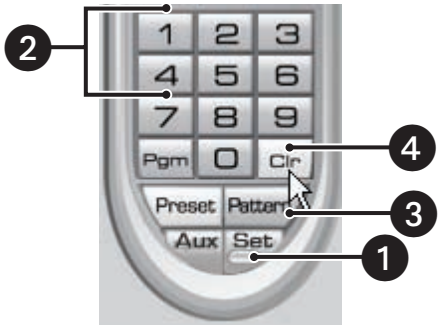

Figure 29. Clearing a Pattern

ACCESSING PROGRAMMING FEATURES OF REMOTE CAMERAS

You can use the PTZ function to program features of remote cameras, such as Pelco's Spectra or Esprit®. Only cameras that support remote programming through D, P, Coaxitron, or supported third-party protocols can use this feature.

The DX8100 allows you to navigate the remote camera menu system using any of the following:

- PTZ OSD Menu controls. For information about using the PTZ OSD Menu controls, refer to *Using the PTZ OSD Menu Control* on page 61.
- Keypad controls. For information about using the keypad controls, refer to *Accessing a Remote Camera Programming Menu* on page 62.
- Keyboard keys. For information about using the keyboard keys, refer to *Using Keyboard Shortcuts to Operate PTZ and Lens Functions* on page 56.

DX8100This section describes how to access the programming features of remote cameras and includes the following topics:

- *Using the PTZ OSD Menu Control*
- *Accessing a Remote Camera Programming Menu* on page 62

Using the PTZ OSD Menu Control

The DX8100 allows you to navigate the menu system of remote cameras using the PTZ OSD Menu control. The PTZ OSD Menu control is available when the DX8100 is in Live View mode. DX8100Alternative methods to navigate the remote camera menu system are as follows:

- Keypad controls. For information about using the keypad controls, refer to *Accessing a Remote Camera Programming Menu* on page 62.
- Keyboard keys. For information about using the keyboard keys, refer to *Using Keyboard Shortcuts to Operate PTZ and Lens Functions* on page 56.

Figure 30 shows the parts of the PTZ OSD Menu control.

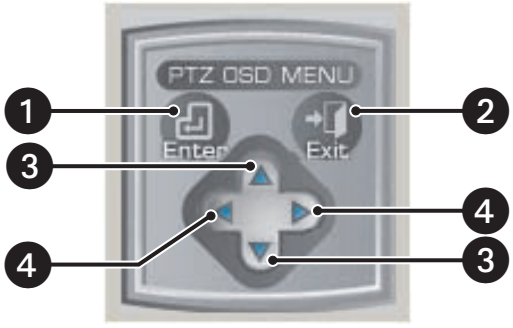

Figure 30. PTZ OSD Menu Control

Table Q describes the parts of the PTZ OSD Menu control.

Table Q. Parts of the PTZ OSD Menu Control

Item	Part	Description
1	Enter	Provides the following actions: • Accepts the selected remote camera OSD menu choice. • Accesses menu option parameters. For example, point the cursor at the Language option and click Enter accesses the list of available languages.
2	Exit	N/A
3	Up and Down Buttons	Navigate up and down the remote camera OSD menu, or cycle through a list of options or parameters.
4	Left and Right Buttons	Perform no activity.

Accessing a Remote Camera Programming Menu

The DX8100 allows you to navigate the remote camera menu system using any of the following:

- PTZ OSD Menu controls. For information about using the PTZ OSD Menu controls, refer to *Using the PTZ OSD Menu Control* on page 61.
- Keypad controls. For information about using the keypad controls, refer to *Accessing a Remote Camera Programming Menu*.
- Keyboard keys. For information about using the keyboard keys, refer to *Using Keyboard Shortcuts to Operate PTZ and Lens Functions* on page 56.

The following procedure instructs you to use the PTZ OSD Menu control to navigate the remote camera programming menu.

To access a programming menu for a remote camera:

1. On the DX8100 toolbar, click the Live button .
2. Drag a remote camera from the Site Tree onto a view panel.

   For certain camera models, you can also select preset number 95 from the keypad to access remote setup mode.
3. To access remote camera setup mode, do one of the following:
   - On the PTZ keypad, click the Pgm button .
   - On the PTZ keypad, click the Set button , the number buttons 9, 5, and the Preset button .

Figure 31. PTZ Control Panel

4. To navigate up and down through camera menu choices, do one of the following:
   - Use the PTZ OSD Menu controls.
   - Use the on-screen PTZ controls or the focus (+) and focus (-) buttons.

5. To select an option from the camera's on-screen menu, do one of the following:
   - On the PTZ OSD Menu, click Enter.
   - On the keypad, click the iris (+) button.
6. Click the iris (-) button to cancel an option or select the Exit command.

   You can also use the on-screen PTZ controls with your mouse to navigate through camera menus. Click and drag the mouse up or down to move between menu options.
7. Click the iris (+) button to select the option, or to exit a menu when the cursor is pointed at the Exit command.

Figure 32. Camera Setup Menu

SENDING AUXILIARY COMMANDS TO A DEVICE

The DX8100 auxiliary feature allows you to control external equipment connected to the auxiliary outputs of Spectra domes or Esprit positioning systems. The auxiliary function is implemented through the D protocol and P protocol. In this case, the attached camera and DX8100 must be configured to communicate using one of these protocols.

The Aux key selects the auxiliary mode. Buttons 1-4 select which of the camera's auxiliary outputs to operate. Buttons 1-4 operate as a toggle (on/off) each time they are clicked.

For example, an Esprit equipped with a wiper uses Aux 1 to control the wiper. In this case, pressing Aux and then 1 sends a command to the Esprit to operate the wiper. You must configure the camera to establish how the camera responds to an auxiliary command. For detailed information about how a specific Spectra or Esprit camera system interprets auxiliary commands, refer to the documentation that accompanies your Spectra or Esprit camera system.

To send an auxiliary command:

1. On the PTZ keypad, click the Set button

to enter the programming mode.
2. Select the camera in the DX8100 view panel to which you want to send the auxiliary command.
3. Click the Aux button. Keypad buttons 1-4 are available.

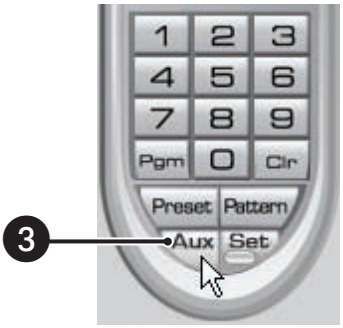

Figure 33. Auxiliary (Aux) Button

4. Click a keypad button (1-4). The auxiliary function, assigned by camera for the selected button, is executed.

CONFIGURING PRESET TOURS

A preset tour allows a camera to move through a programmed sequence of PTZ presets. The DX8100 Series HVR can store up to four preset tours. While four tours can be programmed, only one tour can be activated at a time. A preset tour will operate continuously until another PTZ control action is performed. At least one PTZ preset must be set in order to create a preset tour.

This section describes how to configure preset tours and includes the following topics:

- *Programming a Preset Tour*
- *Activating a Preset Tour* on page 68
- *Deactivating a Preset Tour* on page 68

PROGRAMMING A PRESET TOUR

This section describes how to program a preset tour and includes the following topics:

- *Accessing a Preset Tour Group*
- *Adding Presets to a Tour* on page 66
- *Deleting Presets from a Tour* on page 67

Accessing a Preset Tour Group

To access the "Preset tour group" dialog box:

1. On the DX8100 toolbar, click the Live button .
2. On the PTZ keypad, click the Set button and then click the Pgm button . The "Preset tour group" dialog box opens.
3. Select the preset tour (1-4) that you want to program from the drop-down box.
4. Do one of the following:
   - To add presets to a tour, refer to *Adding Presets to a Tour* on page 66.
   - To delete presets from a tour, refer to *Deleting Presets from a Tour* on page 67.

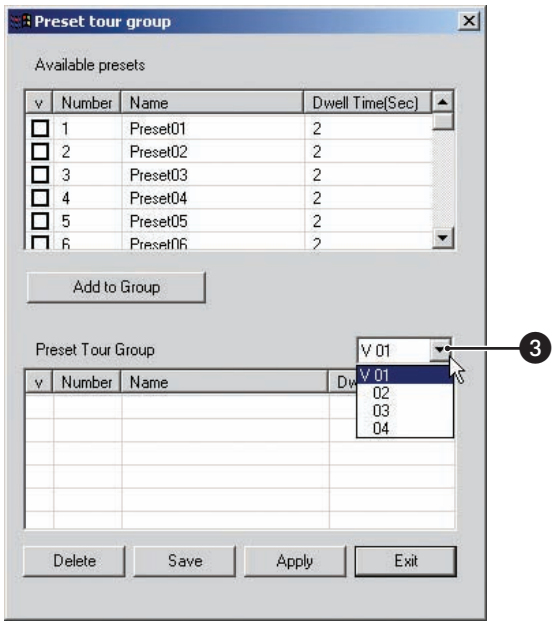

Figure 34. Preset Tour Dialog Box

Adding Presets to a Tour

To add presets to a tour:

1. Access the "Preset tour group" dialog box. For information about accessing the "Preset tour group" dialog box, refer to *Accessing a Preset Tour Group* on page 65.
2. Click the check box beside one of the presets you want to add to the tour.
3. Double-click in the Dwell Time field of a preset, and then increase or decrease the time (in seconds) at which the camera will remain during that sequence of the tour.
4. Repeat steps 1 and 2 for each additional preset you want to add to the tour.
5. Click Add to Group.
6. Click Save.
7. Click Exit to return to the main screen.

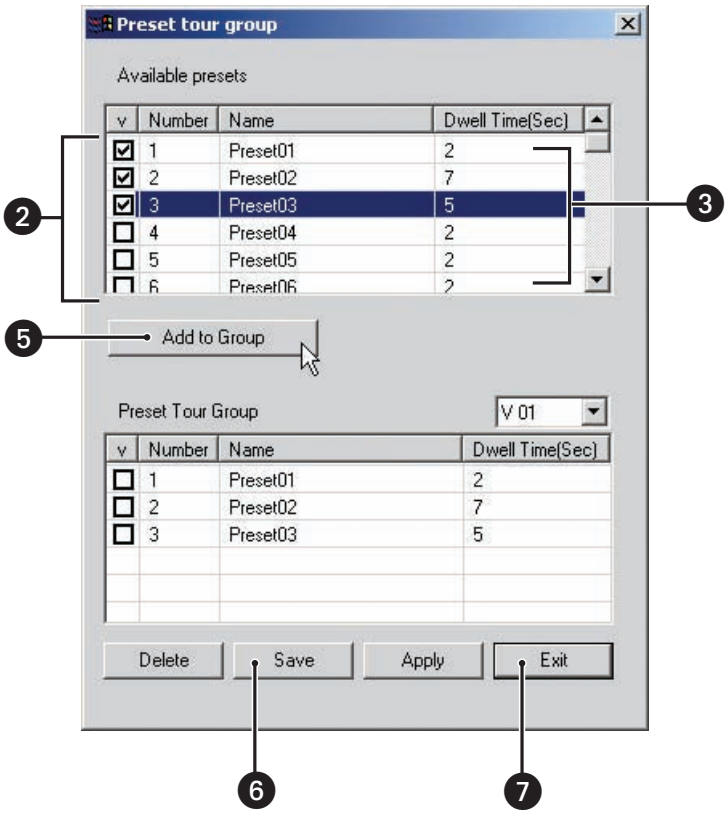

Figure 35. Adding Preset to Tour

Deleting Presets from a Tour

To delete presets from a tour:

1. Access the “Preset tour group” dialog box. For information about accessing the “Preset tour group” dialog box, refer to *Accessing a Preset Tour Group* on page 65.
2. Click the check box beside one or more presets you want to delete from the preset tour group.
3. Click Delete.
4. Click Save.
5. Click Exit to return to the main screen.

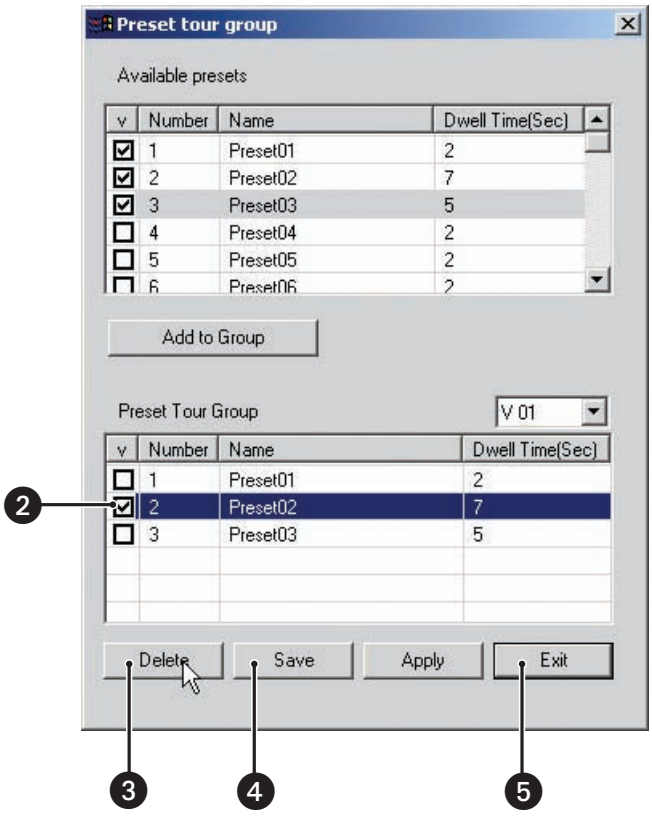

Figure 36. Deleting Preset from Tour

ACTIVATING A PRESET TOUR

This section describes how to activate a preset tour. You can save a preset tour for later use without engaging the tour by not performing step 5. Then, continue on to step 6 without clicking Apply.

To activate a preset tour:

1. On the DX8100 toolbar, click .
2. On the PTZ keypad, click the Set button and then click the Pgm button to bring up the "Preset preset tour group" dialog box.
3. From the drop-down box, select the preset tour (1-4) you want to activate.
4. Click Save.
5. Click Apply.
6. Click Exit to return to the main screen.
7. Click the Set button on the PTZ keypad to exit programming mode.
8. Click the Preset button on the PTZ keypad to activate the tour.

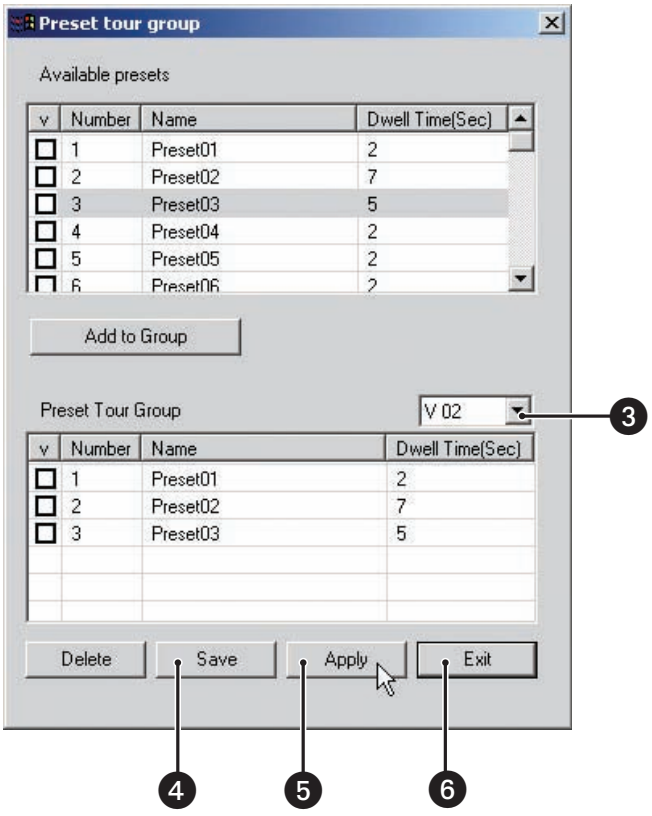

Figure 37. Activating a Preset Tour

To reactivate the last preset tour you configured:

- On the keypad, click Preset.

DEACTIVATING A PRESET TOUR

To deactivate a preset tour, do one of the following:

- Use the mouse to move the on-screen PTZ control.
- Activate a PTZ preset.

Working in Playback Mode

Recorded video can be played back one channel at a time on the DX8100. Like live video, recorded video is viewed from the camera view panels on the main screen. Refer to *Understanding View Panes and Panels* on page 35 for information about view panels. Only users with playback access rights (Standard User by default) and higher are allowed to view recorded video. Playback video can also be displayed in full screen view. For information about displaying playback video in full screen view, refer to *Displaying Playback Video in Full Screen View* on page 35.

This section describes how to use the Playback mode and includes the following topics:

- *Printing Images*
- *Accessing Playback Mode*
- *Assigning Cameras to View Panels*
- *Playback On-Screen Display (OSD)* on page 69
- *Playback Controls* on page 70
- *Playback Timeline* on page 72
- *Playing Back Video by Time* on page 72
- *Playing Back Video by Event* on page 74
- *Operating Playback Digital Zoom* on page 74
- *Viewing Video in the Deinterlaced Mode* on page 95
- *Viewing Live and Playback Video Simultaneously* on page 95

PRINTING IMAGES

To print a still image, use the playback controls to pause video playback at a specific image. Then click the Print button on the DX8100 toolbar.

ACCESSING PLAYBACK MODE

To access the Playback mode, click the Live button on the DX8100 toolbar.

ASSIGNING CAMERAS TO VIEW PANELS

To assign a camera to a view panel:

1. Drag a camera from the Site Tree onto a camera view pane.
2. Repeat this process for up to 36 cameras.

PLAYBACK ON-SCREEN DISPLAY (OSD)

Figure 38. Playback OSD

PLAYBACK CONTROLS

Use the playback controls to start playback, control direction, and adjust speed. On the playback control, click the Stop button ■ at any time to return to live view.

Figure 39 shows the parts of the DX8100 playback controls.

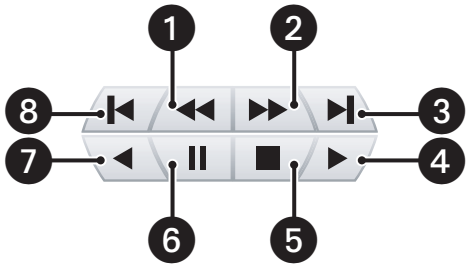

Figure 39. Playback Controls

Table R describes the parts of the payback controls.

Table R. Parts of the Playback Controls

Item	Part	Description
1	Frame-By-Frame Reverse	Each frame is displayed in the reverse direction with each click of the Frame-by-Frame Reverse button.
2	Frame-By-Frame Forward	Each frame is displayed in the forward direction with each click of the Frame-by-Frame Forward button.
3	Fast Forward to End	Advances the bookmark to the end of the latest recorded video.
4	Play Forward	Initiates normal playback of recorded video in the forward direction.
5	Stop	Stops playback control activity and returns to the Live View mode.
6	Pause	Pauses video playback in the forward or reverse direction.
7	Play Reverse	Initiates normal playback of recorded video in the reverse direction.
8	Rewind to Beginning	Returns the bookmark to the start of the earliest recorded video.

Figure 40 shows the parts of the DX8100 playback speed and volume controls.

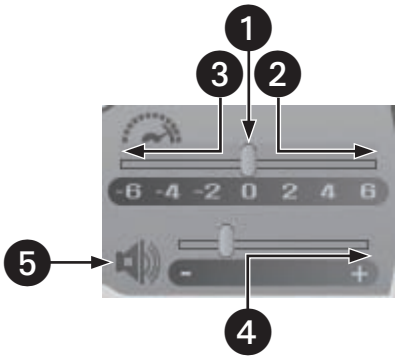

Figure 40. Playback Speed and Volume Controls

Table S describes the parts of the playback speed and volume controls.

Table S. Parts of the Playback Speed and Volume Controls

Item	Part	Description
1	Normal	Playback speed is at normal rate.
2	Faster	Playback speed is increased to a faster rate.
3	Slower	Playback speed is reduced to a slower rate.
4	Louder	Volume is increased to a higher level or decreased to a lower level.
5	Mute	Volume is silenced.

PLAYBACK TIMELINE

The playback timeline is used to select a day and time to begin playback. The timeline includes a horizontal slider that can be moved to select playback time over a 24-hour period. Time periods containing recorded video are represented as color-coded segments of the timeline. Figure 41 shows the parts of the timeline color-coding scheme.

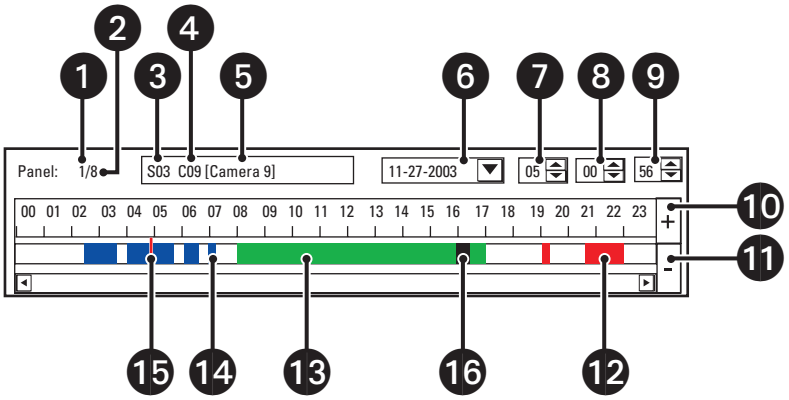

Figure 41. Playback Timeline

Table T describes the parts of the playback timeline control.

Table T. Parts of the Playback Timeline Control

Item	Part	Item	Part
1	Currently displayed view panel	9	Selected second
2	Total number of view windows	10	Increase timeline detail
3	Site number	11	Decrease timeline detail
4	Camera number	12	Alarm recording
5	Camera name	13	Normal recording
6	Selected date	14	Motion detection recording
7	Selected hour	15	Timeline slider
8	Selected minute	16	Instant recording

PLAYING BACK VIDEO BY TIME

This section describes how to play back video by time. The time is displayed in 24-hour clock format. You can select the time by moving the slider along the timeline.

This section includes the following topics:

- *Starting Playback from a Specific Point in Time*
- *Understanding Instant Playback* on page 73

STARTING PLAYBACK FROM A SPECIFIC POINT IN TIME

To start video playback from a particular point in time:

1. On the DX8100 toolbar, click the Live button .
2. Select a camera in the Site Tree. You can also select the camera from a view pane if the camera appears in the panel.

3. In the Timeline section, do the following:
    a. In the Date Selection drop-down box, select the day you want playback to begin.
    b. Use the spinner buttons to select the time.
4. On the playback control, click the Forward button ▶ to begin viewing.

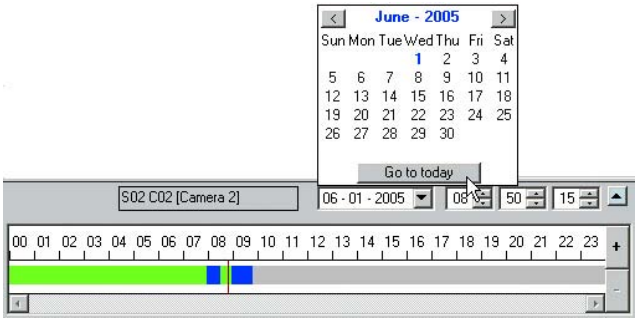

Figure 42. Date Selection Drop-Down Box

UNDERSTANDING INSTANT PLAYBACK

The DX8100's ability to perform instant playback of video is limited by a one-minute delay interval. The DX8100 has a built-in latency of approximately one minute between the time that video is captured and when it is written to the hard disk. This delay exists to ensure that video is accurately stored and the HVR's database is updated correctly.

The delay interval is not affected if the DX8100 is in the alarm or motion record mode. In this case, the pre-alarm or pre-motion time period does not become a factor in determining the delay interval.

To initiate an instant playback:

- On the playback control, click Instant Playback. The timeline is zoomed to the last two or three minutes of data.

The user can view video that has just been recorded. This video resides in memory and has not yet been stored on the hard drive. The color of the timeline for this video will be green. This is because the system cannot identify the data characteristic until the data is stored on the hard disk drive.

For example, if this data is recorded from a camera configured to monitor motion and there is no motion activity, the data will not be stored on the hard disk drive.

PLAYING BACK VIDEO BY EVENT

Users with playback access rights (Standard User by default) and higher can search video by events, such as motion detection or alarm activation. A sensor event is identical to an alarm event.

To play back video recorded during an alarm or motion event:

1. On the DX8100 toolbar, click the Live button .
2. From the DX8100 menu bar, choose View > Index View. The Event Type drop-down box is displayed.

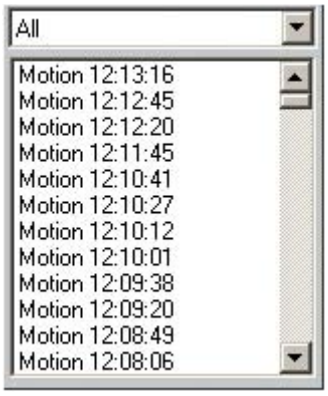

Figure 43. Event Type Drop-down Box

3. Select a camera by clicking it in the Site Tree.
4. In the Date Section drop-down box above the playback timeline, select the day that you want events to be displayed.
5. In the Event Type drop-down box, select the event type you want to view. Options are as follows:
   - All
   - None
   - Motion
   - Alarm in
   - ATM/POS
   - Video Loss
6. Select an event from the listing.
7. On the playback control, click the Forward button to begin viewing.

OPERATING PLAYBACK DIGITAL ZOOM

Video playback can be zoomed (using a control keypad or the mouse) when the DX8100 is in the Playback or Search mode. In Playback mode, the on-screen PTZ feature is replaced with the mouse-activated digital zoom. Playback digital zoom is also available in Search mode. For information about the Playback mode, refer to *Working in Search Mode* on page 78. For information about the Search mode, refer to *Working in Search Mode* on page 78.

This section describes how to operate playback digital zoom and includes the following topics:

- *Zoom Using the Digital Zoom Control*
- *Zoom Using the Mouse* on page 76
- *Panning a Zoomed Image* on page 77
- *Working in Playback Mode* on page 69
- *Working in Search Mode* on page 78

ZOOM USING THE DIGITAL ZOOM CONTROL

The digital zoom feature is accessible when the DX8100 is in the Playback or Search mode. For information about the Playback mode, refer to *Working in Playback Mode* on page 69. For information about the Search mode, refer to *Working in Search Mode* on page 78.

To zoom using the digital zoom control:

1. To place the DX8100 in the Playback or Search mode, do one of the following:
   - On the DX8100 toolbar, click the Live button .
   - On the DX8100 toolbar, click the Search button .
2. On the playback control, click the Forward button to start video playback.
3. Use the Digital Zoom control to zoom and pan video playback.

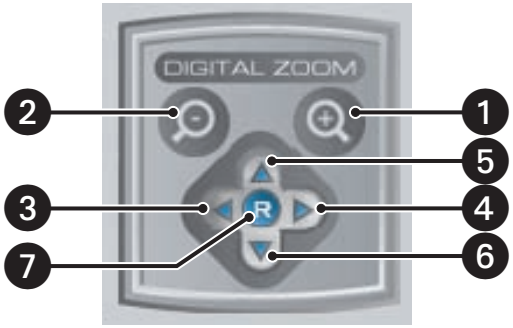

Figure 44. Playback Digital Zoom Control

Table U describes the parts of the Digital Zoom control.

Table U. Parts of the Digital Zoom Control

Item	Part	Description
1	Zoom In	Allows you to magnify the entire pane. Click the Zoom In button to magnify to the next preset magnification level (x1-6).
2	Zoom Out	Allows you to reduce to the previous preset magnification. Click the Zoom Out button to reduce to the previous magnification level.
3	Pan Left	Allows you to move the magnified playback image to the left.
4	Pan Right	Allows you to move the magnified playback image to the right.
5	Pan Up	Allows you to move the magnified playback image up.
6	Pan Down	Allows you to move the magnified playback image down.
7	Zoom Restore	Allows you to return the zoomed image to the original size.

ZOOM USING THE MOUSE

The DX8100 allows you to use the mouse to drag a selection region (rectangle) around a specific area of a pane, and to zoom the selection in and out. A small rectangle about 0.25 inches (6.4 mm) square provides a x6 zoom factor. As the selection area increases in size, the zoom in/out factor decreases: x5, x4, x3, x2, and x1.

- If you use the mouse to select an area about 0.25 inches (6.4 mm) in size, the zoom feature performs as follows:
  - If zooming in, the zoom factor is at x6. The selected viewing area is zoomed to the largest size.
  - If zooming out, the zoom factor is at x6. The selected viewing area is zoomed to the original size.
- If you use the mouse to select the entire pane, the zoom feature performs as follows:
  - If zooming in, the zoom factor is at x1. In this case, the selected viewing area is slightly enlarged. You will have to perform many zoom in operations to arrive at the largest zoom size.
  - If zooming out, the zoom factor is at x1. In this case, the selected viewing area is slightly reduced. You will have to perform many zoom out operations to arrive at the original size.
- You can also use the hand tool and the mouse wheel to zoom in and out.

The zoom factor is displayed in the upper-right corner of the pane. The effective zoom in factor is displayed after the zoom operation is performed. The effective zoom out factor is not displayed.

To zoom using the mouse:

1. To place the DX8100 in the Playback or Search mode, do one of the following:
   - On the DX8100 toolbar, click Live.
   - On the DX8100 toolbar, click Search.
2. On the playback control, click the Forward button to start video playback.
3. Do the following:
   a. To zoom in, click and drag the mouse diagonally to your right in a *downward* direction.

Figure 45. Zoom In Using Mouse

   b. To zoom out, click and drag the mouse diagonally to your left in an *upward* direction.

Figure 46. Zoom Out Using Mouse

PANNING A ZOOMED IMAGE

This section describes how to use the hand tool and mouse wheel to zoom in and out.

To pan a zoomed portion of video within the view panel:

1. To place the DX8100 in the Playback or Search mode do one and of the following:
   - On the DX8100 toolbar, click Live.
   - On the DX8100 toolbar, click Search.
2. Right-click in the view panel. The mouse pointer now resembles a hand.
3. Click the left mouse button, and drag the mouse in the direction you want to move the video image.
4. Right-click again to return to zoom mode.

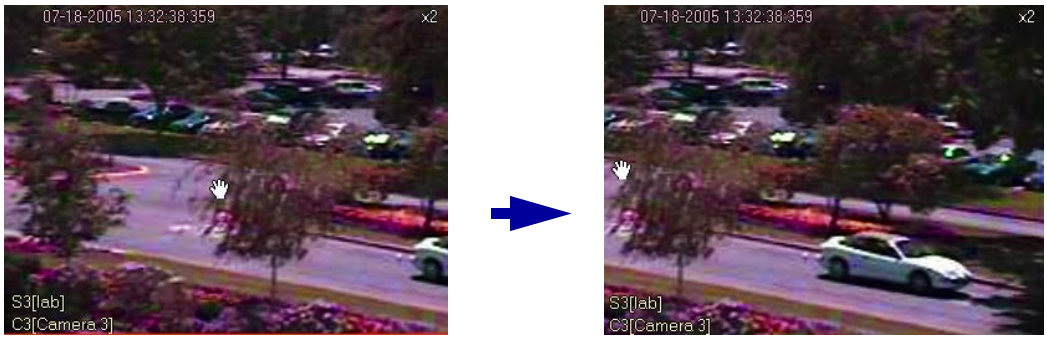

Figure 47. Panning Zoomed Video with the Mouse

Working in Search Mode

The DX8100 Series HVR supports four video search methods: index, thumbnail, POS, and pixel. For information about the user access level required to search video data, refer to *Definition of User Access Levels* on page 170.

To enter the Search mode:

- On the DX8100 toolbar, click Search.

This section describes how to use the Search mode and includes the following topics:

- *Search Window*
- *Displaying a Deinterlaced Image in the Search Mode* on page 79
- *Reusing the Search Time Range* on page 79
- *Index Video Search* on page 80
- *Thumbnail Video Search* on page 81
- *POS Search* on page 82
- *Pixel Video Search* on page 92
- *Working with Special View and Search Methods* on page 94

SEARCH WINDOW

The search window facilitates access to the search capabilities of the DX8100. Available search methods include index, thumbnail, POS, and pixel. Each search method allows users with playback access rights (Standard User by default) and higher to locate video data instantly using criteria such as time of day or changes in window pixels.

As in Playback mode, digital zoom, export, and print features are available in Search mode. For more information, refer to *Operating Playback Digital Zoom* on page 74, *Exporting Video* on page 96, and *Printing Images* on page 69.

Figure 48 shows the parts of the DX8100 window in Search mode.

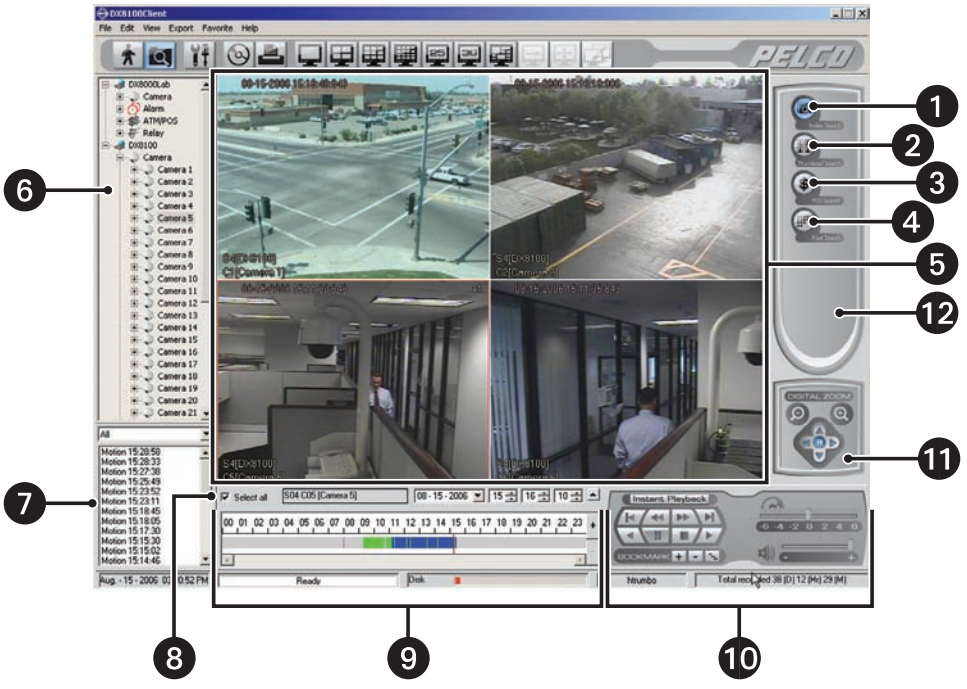

Figure 48. DX8100 Client Search Mode Window

Table V describes the parts of the DX8100 window in the Search mode.

Table V. Parts of the DX8100 Window in Search Mode

Item	Part	Description
❶	Index Search	Allows users to search motion and alarm events listed in the event index panel.
❷	Thumbnail Search	Allows users to visually search video that has been recorded over a 24-hour period. Video is presented as a series of thumbnail images. Each thumbnail represents the first image recorded during a specified period of time. Thumbnails can be expanded and collapsed to represent hourly, 10-minute, and 1-minute intervals.
❸	POS Search	Allows users to search ATM/POS transaction text data.
❹	Pixel Search	Allows users to search any 24-hour period of recorded video automatically for changes in screen pixels.
❺	View Window	Displays search video, image thumbnails, and pixel grid.
❻	Site Tree	Facilitates top-down, hierarchical management of DX8100 resources such as servers, cameras, alarms, and relays.
❼	Event Index Panel	Lists motion and alarm events over the 24-hour time period specified in the playback timeline.
❽	Select All Check Box	Enables playback for all visible view panels when selected. If this check box is deselected, only the selected channel will play. This control is only available while using Index Search.
❾	Playback Timeline	Displays a 24-hour timeline marked with color-coded video events. Allows user to select a date and time for playback.
❿	Playback Control Panel	Provides buttons to control video playback. Includes forward and reverse playback and still image. Also provides controls for playback speed and volume.
⓫	Playback Zoom Control	Provides access to digital zoom features during playback.
⓬	Search Control	Provides access to the index, thumbnail, POS, and pixel search controls.

DISPLAYING A DEINTERLACED IMAGE IN THE SEARCH MODE

If you are searching for an image that is recorded at 4CIF at a low frame rate per second, the viewed image might move or tear. The View menu's Deinterlaced Image option is used to enhance the image during a search activity.

To search video using the deinterlaced option:

1. On the menu bar, click View > Display deinterlaced image.
2. On the DX8100 toolbar, click the Search button . The DX8100 is placed in the Search mode.

REUSING THE SEARCH TIME RANGE

The DX8100 allows sharing of time range search settings between the Thumbnail and Pixel search mode. If you initiate a Thumbnail search, you can select a preview clip and initiate a Pixel search. The Pixel search mode is based on the same time criteria as the preview Thumbnail clip.

INDEX VIDEO SEARCH

Index search allows a user to search video by events, such as motion detection or alarm activation. Events are listed chronologically and by type. To ensure the proper camera channel is selected, check the camera information box above the playback timeline or verify that the desired view panel is framed with a thin red outline. Index video can also be displayed in full screen view. For information about displaying playback video in full screen view, refer to *Displaying Index Search Video in Full Screen View* on page 35.

To search video by motion or alarm events:

1. On the DX8100 toolbar, click the Search button .
2. On the DX8100 Search control, click the Search button .
3. On the DX8100 toolbar, click a view panel division button.
4. From the Site Tree, drag the camera channel you want to search onto one of the view panels.
5. Click the view panel of the channel you want to search.
6. From the drop-down box on the playback timeline, select the day you want playback to begin.
7. Select the event type you want to view from the event type drop-down box.

   Only events recorded for the selected camera are listed in the index. A sensor event is identical to an alarm event. Options are as follows:

   - All
   - None
   - Motion
   - Alarm in
   - ATM/POS
   - Video Loss
8. Select an event from the index.
9. Verify that the "Select all" check box is selected. Deselecting the "Select all" check box will disable playback for all view panels except the channel being searched.

   The DX8100 allows you to view playback on multiple cameras in addition to the camera being searched. This feature is valuable if you want to examine a variety of views recorded at the time a certain event was detected.

10. On the playback control, click the Forward button ▶ to begin viewing.

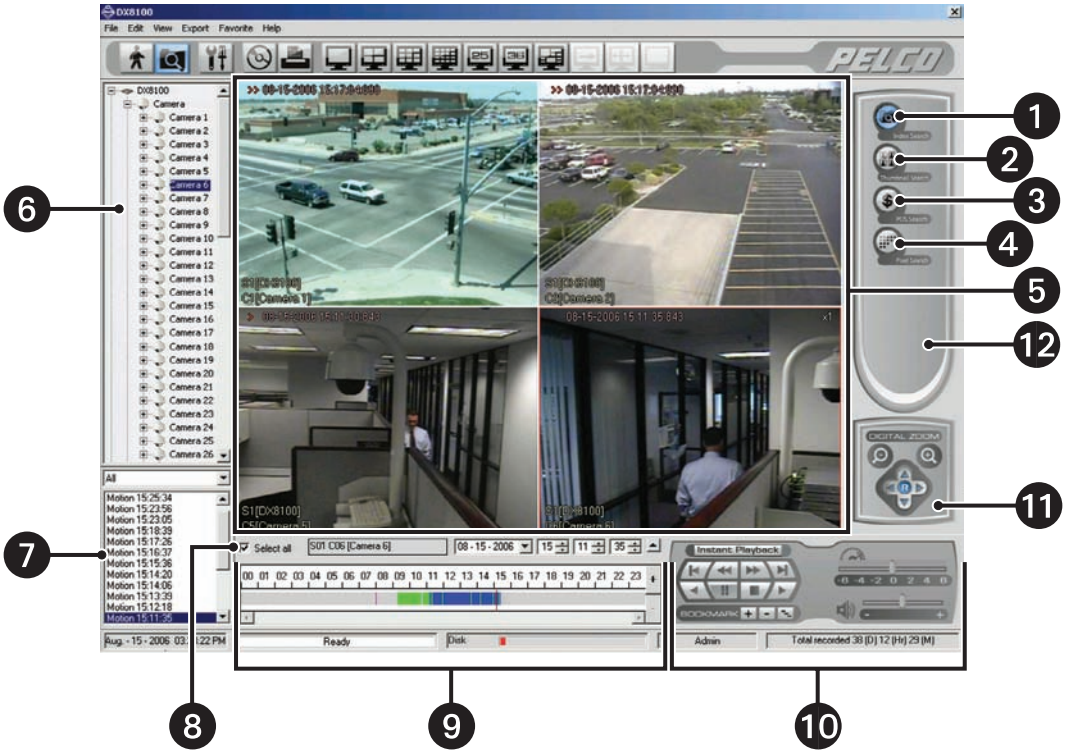

Figure 49. DX8100 Client Index Search Screen

THUMBNAIL VIDEO SEARCH

Thumbnail search allows users to visually search video that has been recorded over a 24-hour period. Video is presented as a series of thumbnail images. Each thumbnail represents the first image recorded during a specified period of time. Thumbnails can be expanded and collapsed to represent hourly, 10-minute, and 1-minute intervals.

The DX8100 allows sharing of time range search settings between the Thumbnail and Pixel search mode. In this case, if you initiate a Thumbnail search, you can select a preview clip and initiate a Pixel search. The Pixel search mode is based on the same time criteria as the preview Thumbnail clip.

To visually search video using thumbnail images:

1. On the DX8100 toolbar, click the Search button .
2. On the DX8100 Search control, click Thumbnail Search button .
3. Select a camera from the Site Tree.
4. From the drop-down box, select the date on which you want to begin your search.
5. Click the thumbnail for the hour you want to begin searching.
6. Click the Expand button to change the thumbnail time range to shorter intervals, or click the Collapse button to change the thumbnail time range to longer intervals.
   - Click the Expand button to change from 1-hour intervals to 10-minute intervals.
   - Click the Expand button again to change from 10-minute intervals to 1-minute intervals.
   - Click the Collapse button once to change from 1-minute intervals to 10-minute intervals.
   - Click the Collapse button again to change from 10-minute intervals to 1-hour intervals.
7. Click the thumbnail of the interval you want to search.

8. Click the Forward button ▶ to view video.

   Double-clicking a thumbnail image will enlarge the image and begin playback.

9. Click ■ to return to thumbnail images.

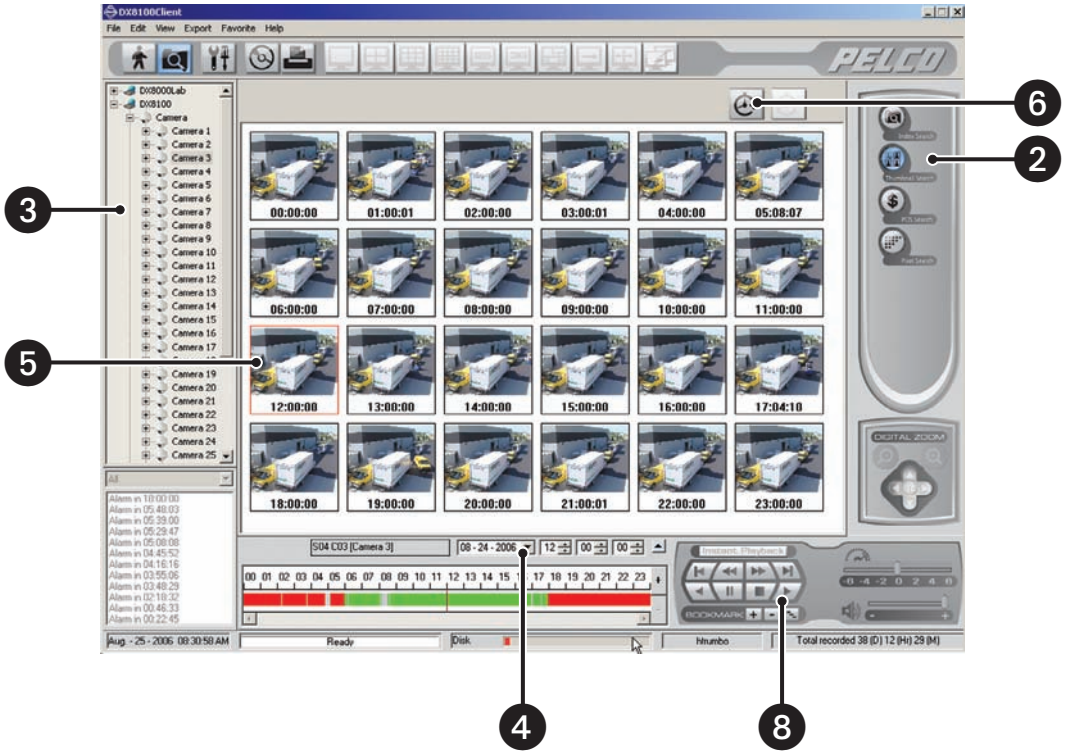

Figure 50. DX8100 Client Thumbnail Search Screen

POS SEARCH

The DX8100 allows a user to search any 24-hour period of recorded POS video and data. To record ATM/POS video and data, the ATM/POS devices and DX8100 must first be connected and configured as follows:

- Connect the ATM/POS devices to the DX8100.
- Set up camera-to-ATM/POS device linking.
- Configure the DX8100 ATM/POS settings for each attached ATM/POS device.
- Start an ATM/POS transmittal and verify that the DX8100 is receiving the ATM/POS video and data.

For information about setting up the DX8100 for ATM/POS applications, refer to the following sections in the DX8100 Operations and Programming manual:

- *Linking Relay Outputs to ATM/POS Events*
- *Linking Cameras to Record in Response to ATM/POS Events*
- *Linking Presets and Patterns to ATM/POS Events*
- *Setting Up ATM/POS Device Communication Ports*
- *Setting UP ATM/POS Device Properties*

This section describes how to use the POS search feature and includes the following topics:

- *Understanding the POS Search View*
- *Searching and Displaying POS Data by Device Name* on page 85
- *Searching by POS Transaction Number* on page 87
- *Searching for All Transactions with Exceptions* on page 88
- *Searching for Transactions That Satisfy Specific Exceptions* on page 89
- *Searching for Transactions by Line Item* on page 90
- *Searching for Transactions by Action Code* on page 91

UNDERSTANDING THE POS SEARCH VIEW

To enter the POS Search mode:

1. On the DX8100 toolbar, click the Search button .
2. On the Search control, click the POS Search button . The POS search view is displayed.

Figure 51 shows the parts of the POS search view.

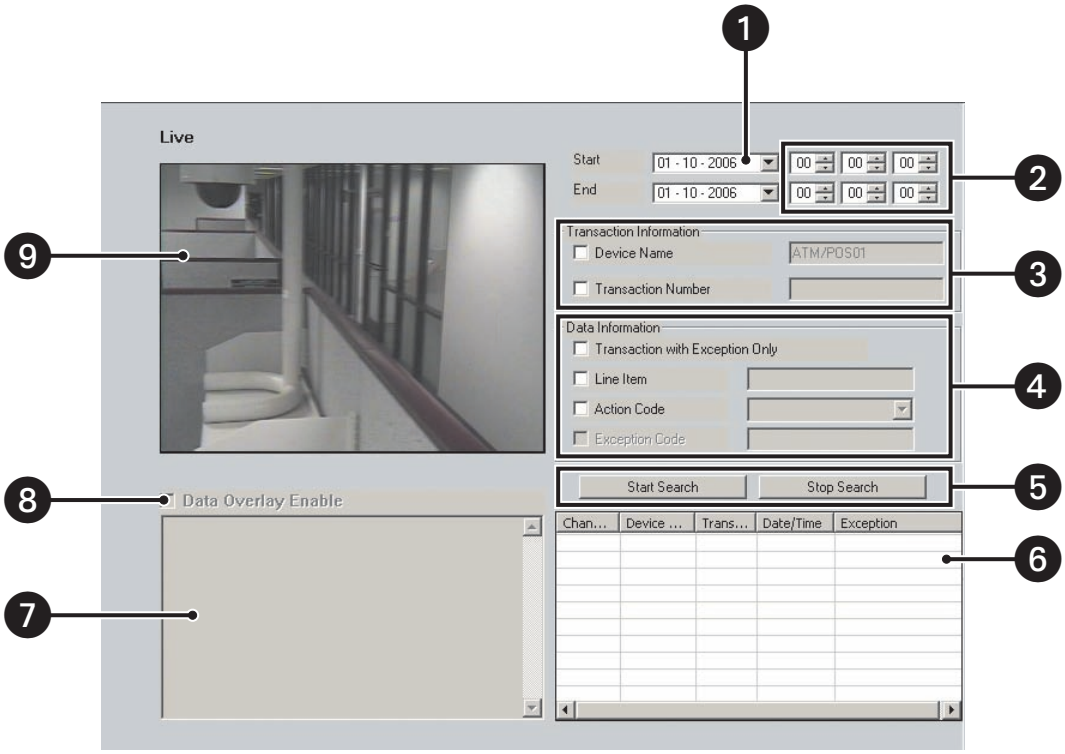

Figure 51. POS Search View

Table W describes the parts of the POS search view.

Table W. Parts of the POS Search View *(1 of 2)*

Item	Part	Description
1	Date	Date range for which to search the video and data.
2	Time	Time range based on a 24-hour time period for searching POS events.
3	Transaction Information	Allows POS search by transaction information options as follows: • **Device name:** The ATM/POS device linked to a specific camera. In this case, selecting a camera linked to an ATM/POS device automatically inserts the name of the ATM/POS device in the Device Name box. • **Transaction Number:** A number assigned by the ATM/POS device that is printed on the sales are transaction receipt.
4	Data Information	Allows POS search by data information options as follows: • **Transaction with Exception Only:** Finds all transactions for which an exception is defined. • **Line Item:** Allows you to search POS data by a specific transaction line item, based on the following guidelines: – Line item entries are not case sensitive. Enter lower or uppercase characters. – Specify the asterisk (*) wildcard. – Search by a single word or multiple words appearing in a transaction line. – Type the first few characters of the *first* word appearing in the transaction and the wildcard. For example, type sma* for a line item containing the entry "small orange juice." The search returns all transactions that contain the word "small." – Type the first few characters of the *second* word in a transaction and the wildcard. For example, type ora* for a line item containing the entry "small orange juice." The search returns all transactions that contain the word "orange." – Search by abbreviation. For example type 6-pk, for a line item containing the entry "Soda 6-pk." The search returns all transactions that contain the abbreviation "6-pk." • **Action Code:** A two-letter abbreviation designating a specific action code. For information about action codes, refer to the *Setting Up ATM/POS Device Properties* section in the Operations and Programming manual. • **Exception Code:** A predefined transaction filter used to detect a specific data structure within the ATM/POS transaction data. For information about exceptions, refer to the *Setting Up ATM/POS Exceptions* section in the Operations and Programming manual.
5	Start and Stop	**Start:** Initiates a search event. **Stop:** Ends a search event.
6	POS Search Table	Lists the data discovered in response to the POS options selected for the transaction and data information. • **Channel number:** From 1–16. • **Device name:** By default, ATM/POS01 to ATM/POS16. The device name can be changed. • **Transaction number:** Number assigned by the ATM/POS device to the transaction data. • **Date/Time:** Date and time transaction is recorded. • **Exception:** Yes if an exception filter is active for the transaction data has an exception. No if the transaction does not have an exception filter. The transaction and data information are based on the ATM/POS configuration settings derived from the following: • Data format • ATM/POS exceptions • Exception action codes For information about setting up ATM/POS transaction and data options, refer to the *Setting Up ATM/POS Device Properties* section in the Operations and Programming manual.

Table W. Parts of the POS Search View *(2 of 2)*

Item	Part	Description
❼	Data Window	Area where recorded transaction data is displayed.
❽	Data Overlay Box	The function is not supported at this time.
❾	Video Window	Area where live and playback (recorded) video is viewed. Playback video is started at the date and time specified for the respective transaction data as shown in the POS Search table. The DX8100 playback controls are used to view playback video.

SEARCHING AND DISPLAYING POS DATA BY DEVICE NAME

You can perform a general search for POS transaction data record for a particular ATM/POS device and its associated camera. Use the date and time and ATM/POS device name as the search criteria. The search results contain all POS transactions recorded for that device according to the specified date and time.

Searching POS Data by Device Name

To search POS transaction data by ATM/POS device name:

1. On the DX8100 toolbar, click the Search button .
2. On the Search control, click the POS Search button . The POS search view is displayed.
3. To select a channel, in the DX8100 Site Tree, click a camera that is linked to an ATM/POS device.

   By default, the name of the ATM/POS device linked to the selected camera/channel is displayed in the Device Name box. In this case, the Device Name box is deselected.
4. Select the date and time for the POS search event as follows:
   a. Select the Start date.
   b. Select the End date.
   c. Select the End time.
   d. Select the Start time.
5. In the Transaction Information section, click the check box to select Device Name. The Device Name box is available.
6. Verify that the ATM/POS device name displayed in the Device Name box is the correct device for the search.

7. Click Start Search. The POS Search Table is populated with POS transaction data.

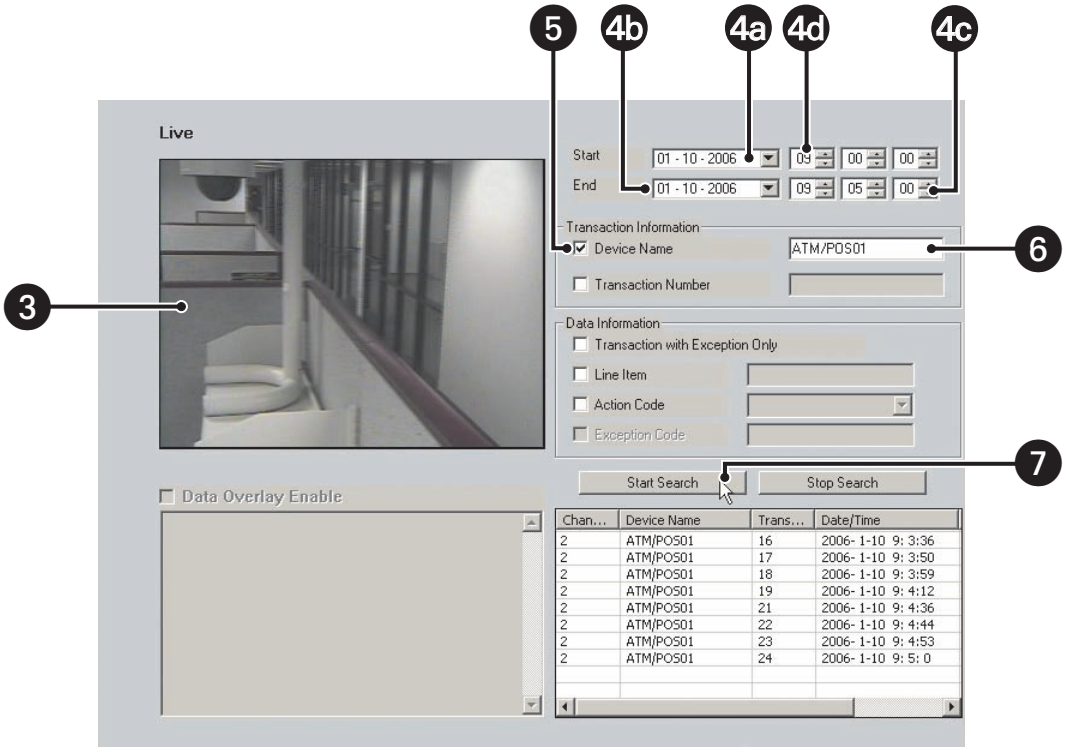

Figure 52. POS Transaction Search by Device Name

Displaying POS Data Discovered by Device Name

To display a POS transaction and its associated video:

1. On the DX8100 toolbar, click the Search button .
2. On the Search control, click the POS Search button . The POS search view is displayed.
3. Perform a POS search by device name. For information about performing a search by ATM/POS device name, refer to *Searching POS Data by Device Name* on page 85.
4. In the POS Search Table, click a transaction. The transaction data is displayed in the Data window.
5. On the playback control, click Play. The video recorded for the selected POS transaction is played back and is displayed in the Video window.

6. Use the playback control to stop or pause playback, reverse playback, and so forth.

Figure 53. Display a POS Transaction Search by Device Name

SEARCHING BY POS TRANSACTION NUMBER

The DX8100 allows you to search for a POS event by transaction number. You must specify the channel, date, and a time window in which the transaction is recorded.

To search for a POS event by transaction number:

1. On the DX8100 toolbar, click the Search button .
2. On the Search control, click the POS Search button . The POS search view is displayed.
3. To select a device name, do one of the following:
   - In the DX8100 Site Tree, click a camera that is linked to an ATM/POS device.

     By default, the name of the ATM/POS device linked to the selected camera/channel is displayed in the Device Name box. In this case, the Device Name box is deselected.

   - In the Transaction Information section, click the check box to select Device Name. When the Device Name box is enabled, type the ATM/POS device name in the box.
4. Set the date and time range you want to search for the transaction number.
5. In the Transaction Information section, click the check box to select Transaction Number. The Transaction Number box is available.
6. In the Transaction Number box, type the transaction number.
7. Click Start Search. If the channel, date, time, and transaction number are valid, the POS transaction is displayed in the POS Search Table.
8. In the POS Search Table, click a transaction entry. The transaction data is displayed in the Data window.

9. On the playback controls, click the Forward button. The video recorded for the transaction is displayed in the Video window.

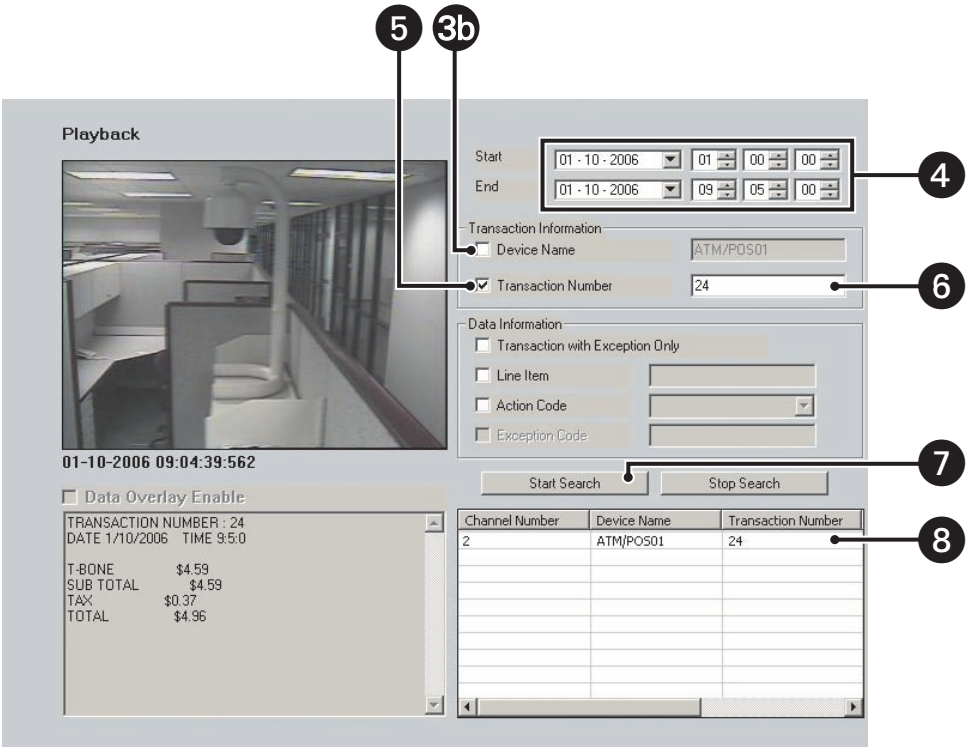

Figure 54. Searching an POS Event by Transaction Number

SEARCHING FOR ALL TRANSACTIONS WITH EXCEPTIONS

The DX8100 allows you to search for transactions that meet conditions defined by one or more exceptions. In this case, you must configure your search criteria based on the following:

- **Channel:** The camera that captured the video and is linked to the ATM/POS device that produced the transaction data.
- **Date/time:** The date and time window within which the transactions were recorded.

To use an exception to search transaction data, the exception must be created before recording the transaction data. If the transaction data is recorded before the exception filter is defined, the exception filter will not find the data structure within the transaction data.

To search for only POS events by transaction with exception:

1. On the DX8100 toolbar, click the Search button .
2. On the Search control, click the POS Search button . The POS search view is displayed.
3. To select a ATM/POS device, do one of the following:
   - In the DX8100 Site Tree, click a camera that is linked to the ATM/POS device.

     By default, the name of the ATM/POS device linked to the selected camera/channel is displayed in the Device Name box. In this case, the Device Name box is deselected.

   - In the Transaction Information section, click the check box to select Device Name. When the Device Name box is enabled, type the ATM/POS device name in the box.
4. Set the date and time range for the search.
5. In the Data Information section, click the check box to select Transaction with Exception Only. The Exception Code check box is available.
6. Click Start Search. If the device name/channel, date, and time are valid, and if transactions with exceptions were recorded during the time range, the transactions are displayed in the POS Search Table.
7. In the POS Search Table, click a transaction. The transaction data is displayed in the Data window.

8. On the playback controls, click the Forward button. The video recorded for the transaction is displayed in the Video window.

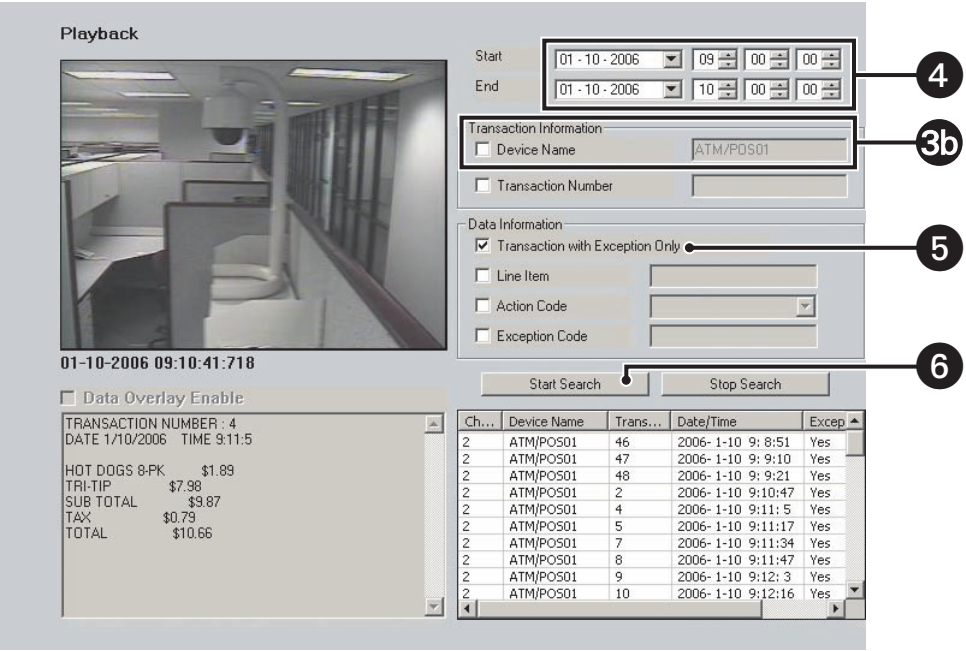

Figure 55. Searching for Transaction with Exception Only Events

SEARCHING FOR TRANSACTIONS THAT SATISFY SPECIFIC EXCEPTIONS

The DX8100 allows you to search for and display ATM/POS transactions that meet conditions as defined by one or more exceptions. You can use specific exception codes to define the search criteria. To use an exception to search transaction data, the exception must be created before recording the transaction data. If the transaction data is recorded before the exception filter is defined, the exception filter will not find the data structure within the transaction data.

The search criteria is based on the following:

- **Channel:** The camera that captured the video and is linked to the ATM/POS device that produced the transaction data.
- **Date/time:** The date and time window within which the transactions were recorded.
- **Exception code:** The predefined transaction filter used to detect a specific data structure within the ATM/POS transaction data.

To search for transactions that meet specific exceptions:

1. On the DX8100 toolbar, click the Search button .
2. On the Search control, click the POS Search button . The POS search view is displayed.
3. To select a ATM/POS device, do one of the following:
   - In the DX8100 Site Tree, click a camera that is linked to the ATM/POS device.

     By default, the name of the ATM/POS device linked to the selected camera/channel is displayed in the Device Name box. In this case, the Device Name box is deselected.

   - In the Transaction Information section, click the check box to select Device Name. When the Device Name box is enabled, type the ATM/POS device name in the box.
4. Set the date and time range for the search.
5. In the Data Information section, do the following:
   a. Click the check box to select Transaction with Exception Only. The Exception Code check box is available.
   b. Click the check box to select Exception Code. The Exception Code box is available.
   c. Type the exception code in the box.

6. Click Start Search. If the device name/channel, date, and time are valid, and if transactions with exceptions were recorded during the time range, the transactions are displayed in the POS Search Table.

7. In the POS Search Table, click a transaction. The transaction data is displayed in the Data window.

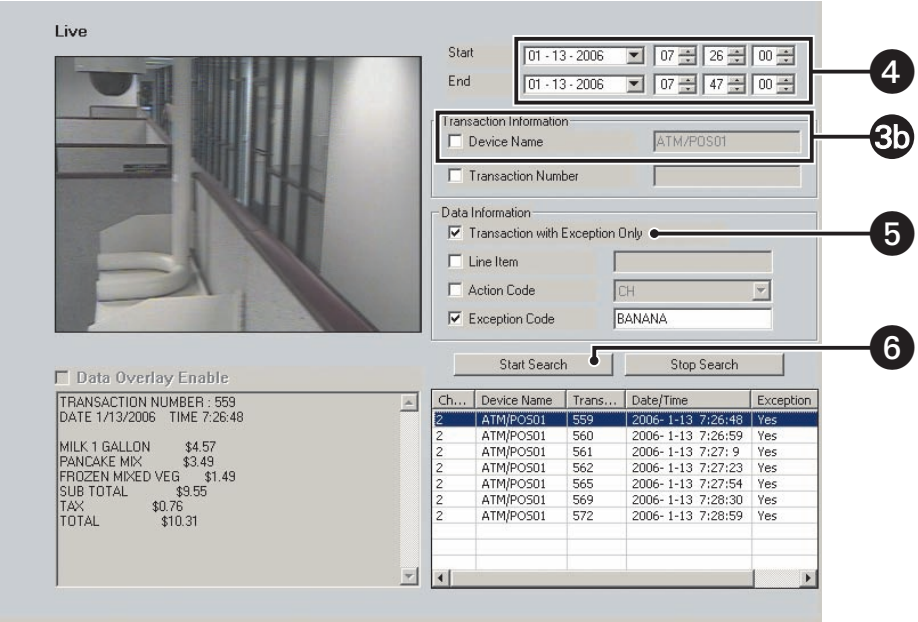

Figure 56. Transactions that Satisfy Specific Exception Filters

SEARCHING FOR TRANSACTIONS BY LINE ITEM

The DX8100 allows you to search for and display ATM/POS transactions that contain a unique line item. Use the asterisk (*) as a wildcard character to substitute for zero or more characters.

The search criteria is based on the following:

- **Channel:** The camera that captured the video and is linked to the ATM/POS device that produced the transaction data.
- **Date/time:** The date and time window within which the transaction(s) were recorded.
- **Line item:** The line item has the following guidelines:
  - Line item entries are not case sensitive. Enter lower- or uppercase characters.
  - Specify the asterisk (*) wildcard.
  - Search by a single word or multiple words appearing in a transaction line.
  - Enter the first few characters of the *first* word appearing in the transaction and the wildcard. For example, type sma* for a line item containing the entry "small orange juice." The search returns all transactions that contain the word "small."
  - Enter the first few characters of the *second* word in a transaction and the wildcard. For example, type ora* for a line item containing the entry "small orange juice." The search returns all transactions that contain the word "orange."
  - Search by abbreviation. For example, type 6-pk for a line item containing the entry "Soda 6-pk." The search returns all transactions that contain the abbreviation "6-pk."

To search for transactions that contain a unique line item:

1. On the DX8100 toolbar, click the Search button .

2. On the Search control, click the POS Search button .The POS search view is displayed.

3. To select a ATM/POS device, do one of the following:
   - In the DX8100 Site Tree, click a camera that is linked to the ATM/POS device.

     By default, the name of the ATM/POS device linked to the selected camera/channel is displayed in the Device Name box. In this case, the Device Name box is deselected.

   - In the Transaction Information section, click the check box to select Device Name. When the Device Name box is enabled, type the ATM/POS device name in the box.
4. Set the date and time range for the search.
5. In the Data Information section, do the following:
   a. Click the check box to select Line Item. The Line Item box is available.
   b. Type the name of the line item in the box.
6. Click Start Search. If the device name/channel, date, and time are valid, transactions containing the line item are displayed in the POS Search Table.
7. In the POS Search Table, click a transaction. The transaction data is displayed in the Data window.

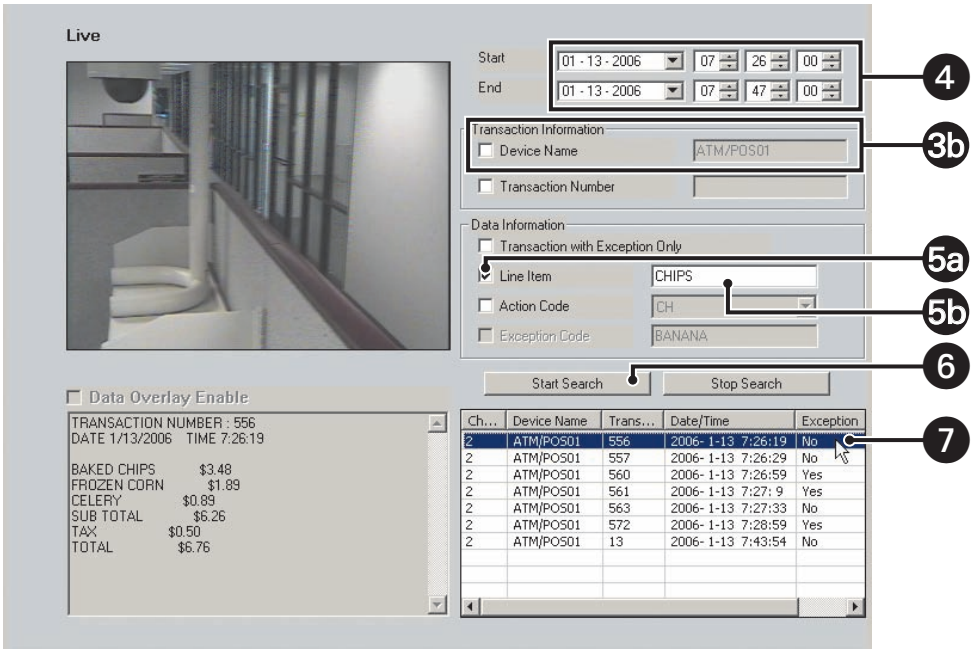

Figure 57. Transactions that Contain a Unique Line Item

SEARCHING FOR TRANSACTIONS BY ACTION CODE

The DX8100 allows you to search for and display ATM/POS transactions by action code. To use an action code to search transaction data, the action code must be created before recording the transaction data. If the transaction data is recorded before the action code is defined, the action code will not find the data structure within the transaction data.

The search criteria is based on the following:

- **Channel:** The camera that captured the video and is linked to the ATM/POS device that produced the transaction data.
- **Date/time:** The date and time window within which the transaction(s) were recorded.
- **Action code**: The special two-character filter that defines a specific transaction event.

To search for transactions by action code:

1. On the DX8100 toolbar, click the Search button .
2. On the Search control, click the POS Search button . The POS search view is displayed.

3. To select a ATM/POS device, do one of the following:
   - In the DX8100 Site Tree, click a camera that is linked to the ATM/POS device.

     By default, the name of the ATM/POS device linked to the selected camera/channel is displayed in the Device Name box. In this case, the Device Name box is deselected.

   - In the Transaction Information section, click the check box to select Device Name. When the Device Name box is enabled, type the ATM/POS device name in the box.
4. Set the date and time range for the search.
5. In the Data Information section, do the following:
   a. Click the check box to select Action Code. The Action Code drop-down box is available.
   b. In the Action Code drop-down box, select an action code.

      For information about action codes, refer to the *Using Action Codes* section in the DX8100 server Operation/Configuration manual.
6. Click Start Search. If the device name/channel, date, and time are valid, transactions containing the line item are displayed in the POS Search Table.
7. In the POS Search Table, click a transaction. The transaction data is displayed in the Data window.

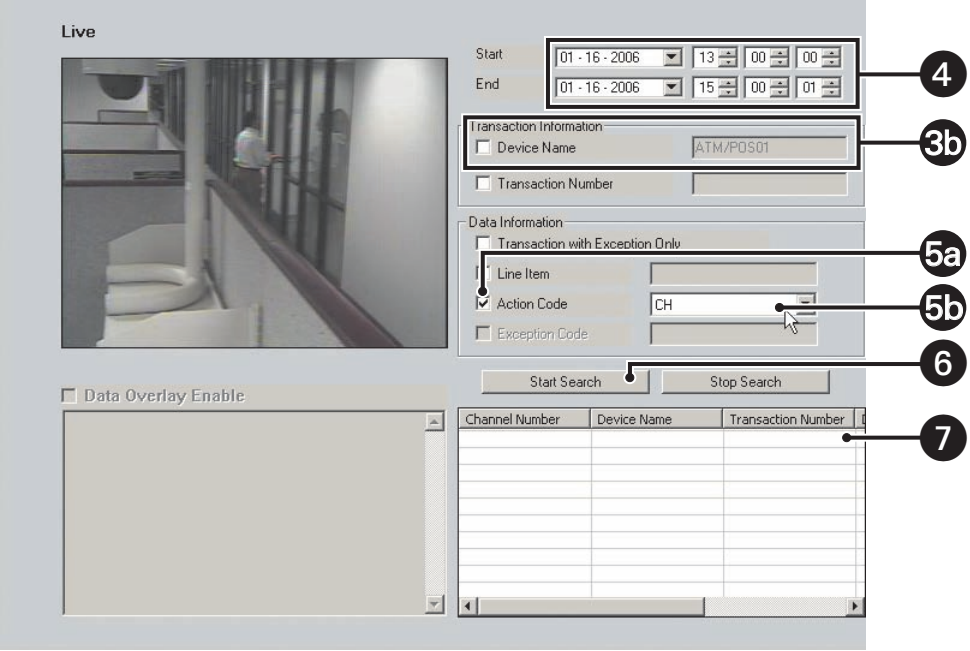

Figure 58. Searching Transactions by Action Code

PIXEL VIDEO SEARCH

The DX8100 allows a user to automatically search any 24-hour period of recorded video for changes in screen pixels. This feature can be configured to identify motion events even when motion detection has not been enabled on a camera.

The DX8100 allows sharing of time range search settings between the Thumbnail and Pixel search mode. If you initiate a Thumbnail search, you can select a preview clip and initiate a Pixel search. The Pixel search mode is based on the same time criteria as the preview Thumbnail clip.

This section describes how to search video by changes in screen pixels and includes the following topics:

- *Searching Video Based on Changes in Screen Pixels* on page 92
- *Viewing a Video Thumbnail* on page 94

SEARCHING VIDEO BASED ON CHANGES IN SCREEN PIXELS

DX8100 pixel video search is accomplished in two steps:

- Searching recorded video for changes in screen pixels.

After the search has been completed, the DX8100 displays a series of thumbnails below the search grid. Each thumbnail contains the first image of recorded video for the specified date and time range period.

NOTE: A pixel search might not detect obvious movement.

- Viewing the thumbnails.

  For information about how to view the video thumbnail, refer to *Viewing a Video Thumbnail* on page 94.

To search video by analyzing changes in screen pixels:

1. On the DX8100 toolbar, click the Search button .
2. On the Search control, click the Pixel Search button .
3. Select a camera from the Site Tree.
4. From the drop-down box, select the date on which you want to begin your search.
5. Select the start and end times to define your search range.
6. Using your mouse, highlight the areas on the grid that you want to search for pixel changes.
   - Hold down the *left* mouse button and drag to *select* areas.
   - Hold down the *right* mouse button and drag to *clear* areas.
7. Adjust the pixel sensitivity threshold. Moving the slider to the left decreases sensitivity and moving it to the right increases sensitivity.
8. Click Start. Wait for the progress line on the status bar to return to Ready.
9. Use the Show Grid icon to show and hide the pixel grid for a clearer view in the search screen.

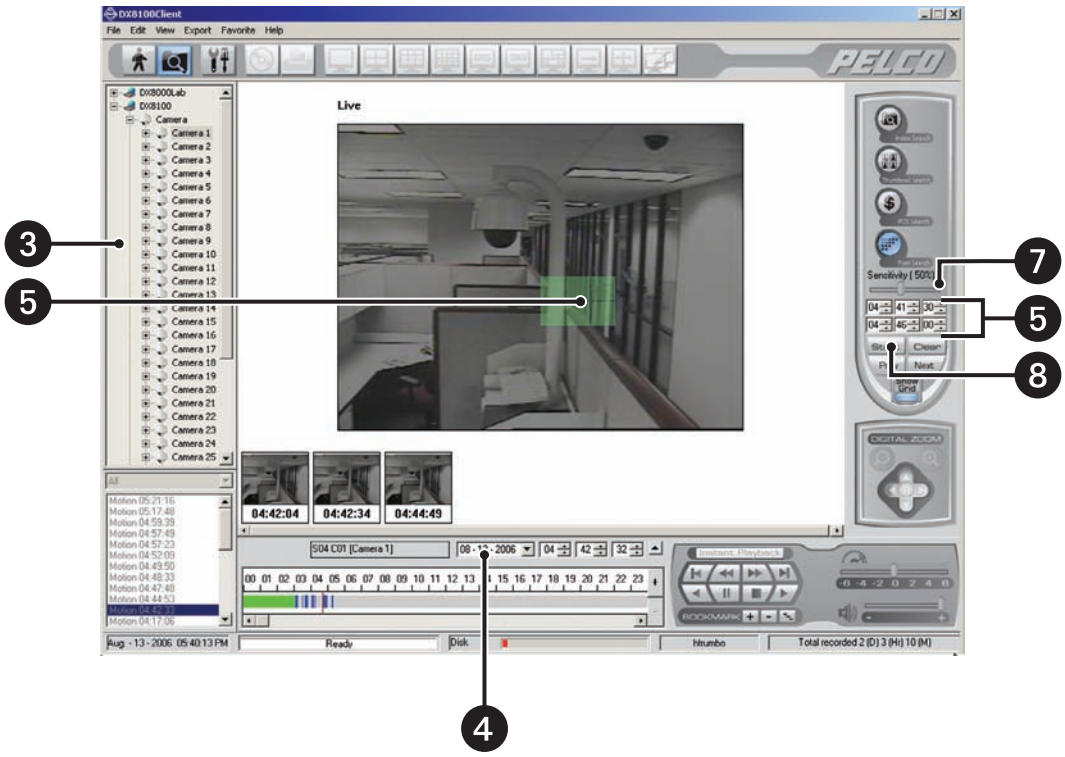

Figure 59. Pixel Search Screen

VIEWING A VIDEO THUMBNAIL

After the search has been completed, a series of thumbnails appear on the screen below the search grid. Each thumbnail contains the first image of recorded video for the listed time period.

- Double-clicking a thumbnail will cause it to begin playing.
- Click the Prev button Prev and the Next button Next to move backward and forward through thumbnails.

To view a video thumbnail:

1. Click a thumbnail. The thumbnail's search parameters (date and time) are displayed below the search grid. The thumbnail's search start time is a few seconds ahead of the search start time you entered.

Figure 60. Thumbnail Images Marking Pixel Changes

2. To locate playback at the start of the first image, click Reverse playback button ◀. The video scene is played back and displayed in reverse.
3. Click the Pause button ⏸ to pause the video playback when the beginning of the first recorded is reached.
4. Click the Forward button ▶. Playback starts and the video scene is displayed.
5. Click the Clear button Clear to remove the thumbnail results.

WORKING WITH SPECIAL VIEW AND SEARCH METHODS

The DX8100 allows you to do the following:

- View video in the deinterlaced mode.
- View live and playback video simultaneously.
- View, search, export, and print backed up video.

This section describes how to use special view and search methods and includes the following topics:

- *Viewing Video in the Deinterlaced Mode*
- *Viewing Live and Playback Video Simultaneously*
- *Viewing and Searching Backed up Video* on page 165

VIEWING VIDEO IN THE DEINTERLACED MODE

Images recorded at 4CIF at a low frame rate per second might move or tear. In this case, you can use the View menu's Deinterlaced Image option to enhance the displayed image. In the deinterlaced mode, the DX8100 converts the recorded image and displays it at 2CIF resolution. The process removes one of the 4CIF interlaced fields (even or odd) from the 4CIF recorded image to arrive at 2CIF resolution for the displayed image. The original image is retained at the recorded 4CIF resolution.

For exported images, the DX8100 provides a global option for enabling a deinterlacing filter. In this case, the selected channel's image is exported at 2CIF resolution. This setting is effective for all channels and cannot be set for individual channels. For more information about enabling the denaturalizing filter, refer to *Enabling the Deinterlacing Filter* on page 100.

To view video using the deinterlaced option:

1. Click the Forward button to start video playback.
2. On the menu bar, click View > Display deinterlaced image.

VIEWING LIVE AND PLAYBACK VIDEO SIMULTANEOUSLY

The DX8100 allows simultaneous viewing of live and playback video from a single camera source.

To view live and playback video from the same camera:

1. On the DX8100 toolbar, click the Live button .
2. Drag a camera from the Site Tree to a view panel.
3. Click the Forward button to begin playback.
4. Drag the *same camera* from the Site Tree onto a different view panel while video is playing.

Exporting Video

Power Users and Administrators can export sections of prerecorded video to a local hard disk drive or other device attached to a client computer. The following instructions demonstrate how to export video.

- You must put the recorder in Playback or Search mode to export video. You cannot access Export in Live mode.
- To export video or still images to a CD-R/RW or DVD-R/RW, you must have Nero® Express 7 Essentials software installed on your client computer. This version of software is included with your DX8100.

This section describes how to export video and includes the following topics:

- *Exporting Bookmarked Video Regions*
- *Inserting and Removing a USB Flash Drive* on page 99
- *Enabling the Deinterlacing Filter* on page 100
- *Mapping and Disconnecting a Network Drive* on page 100
- *Performing the Export* on page 101
- *Stopping an Export While in Process* on page 107

EXPORTING BOOKMARKED VIDEO REGIONS

You can bookmark multiple regions of video along the timeline for export. Bookmarked regions are designated with start point and end point bookmarks. Multiple regions can be bookmarked along a single 24-hour timeline, but only a single channel can be exported at a time. Bookmarked regions are listed in the Export Video dialog box at the time of export.

Table X describes the bookmark controls.

Table X. Bookmark Controls

Button	Command	Description
	Add Bookmark	Does the following: • Adds a red bookmark flag to mark the beginning of a start point. • Adds a gray bar to indicate the range between the start point and end point.
	Remove Bookmark	Removes the selected bookmark.
	Remove All Bookmarks	Removes all bookmarks.

CREATING BOOKMARKS

To select a region to export:

1. Make sure the HVR is in Playback or Search mode by clicking the Live button or the Search button .
2. Click the Forward button if you are in Live mode, or proceed to step 3 if you are in Search mode.
3. Select a camera from the Site Tree.
4. Locate the timeline slider at the *beginning* of the range you want to bookmark.

   You can use the drop-down box and spinner buttons above the timeline to locate a bookmark.

5. Click [+]. A red bookmark flag appears on the timeline.

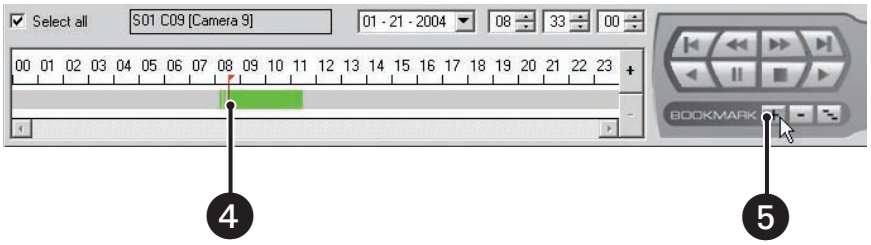

Figure 61. Setting a Starting Bookmark

6. Locate the timeline slider at the *end* of the range you want to bookmark.
7. Click the Add Bookmark button [+]. The bookmark flag and the region between bookmarks turn gray.

   Exporting a bookmarked region of video requires start and end bookmarks. If only one bookmark is set, video will not be marked for export.
8. Repeat steps 4-7 for each additional region you want to bookmark for that camera.
9. Click the Forward button [▶] if you are in Live mode, or proceed to step 8 if you are in Search mode.
10. Click the Export button [ ] and follow the directions in *Performing the Export* on page 101.

CLEARING BOOKMARKS

This section describes how to clear bookmarks and includes the following topics:

- *Clearing a Single Bookmark* on page 97
- *Clearing All Bookmarks* on page 97

Clearing a Single Bookmark

To clear a single bookmark:

1. Select a bookmark flag from the timeline. The bookmark flag should change to a light green color.
2. Click the Remove Bookmark button [–] to remove the selected bookmark.

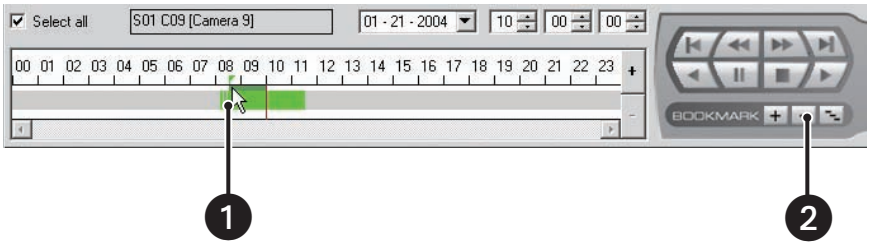

Figure 62. Removing a Single Bookmark

Clearing All Bookmarks

To clear all bookmarks:

- Click Remove All Bookmarks.

BOOKMARKING AND EXPORTING MULTIPLE CHANNELS

The DX8100 allows you to bookmark a video region for one camera and apply that book marked time window to multiple channels. This feature is used in conjunction with the export feature. For example, if you want to export video recorded between 9:00 a.m. and 9:05 a.m. for multiple cameras, you set the bookmarks for camera 1 at 9:00 a.m. and 9:05 a.m. During the export process you can associate that same bookmarked time window with multiple cameras.

To book mark data and export video for multiple channels:

1. On the DX8100 toolbar, click the Search button . This ensures that the HVR is in the Search mode.
2. Select a camera from the Site Tree.
3. Locate the timeline slider at the *beginning* of the range you want to bookmark.

   You can use the drop-down box and spinner buttons above the timeline to locate a bookmark.
4. To create book marks, do the following:

   a. Click the Expand Bookmark button [+]. A red bookmark flag appears on the timeline.

   b. Locate the timeline slider at the *end* of the range you want to bookmark.

   c. Click Expand Bookmark button [+]. The bookmark flag and the region between bookmarks turn gray.

      Exporting a bookmarked region of video requires start and end bookmarks. If only one bookmark is set, video will not be marked for export.

   d. Repeat steps 3 and 4 for each additional region you want to bookmark for that camera.

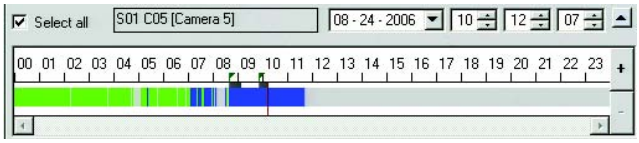

Figure 63. Book Marking Multiple Time Regions

5. Click click the Export button . The Export Video dialog box opens.
6. Do the following:

   a. Right click the time range you want to assign to multiple channels. The Duplicate Bookmark submenu is displayed.

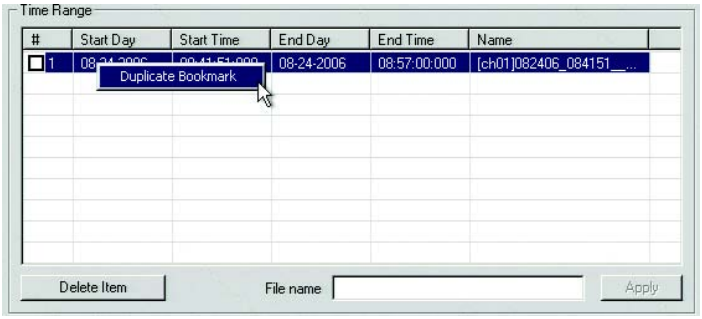

Figure 64. Selecting a Time Range for Duplication

   b. Click Duplicate Bookmark. The Select Channel dialog box opens.

   c. Click the check box for each channel to which you want to assign the book mark region.

   d. Click OK. The time range for each selected channel is displayed in the Time Range table.

7. Do the following:
    a. In the Device panel, click the check box of the desired export device.
    b. Click the check box for each time range you want to export.
8. Click Export.

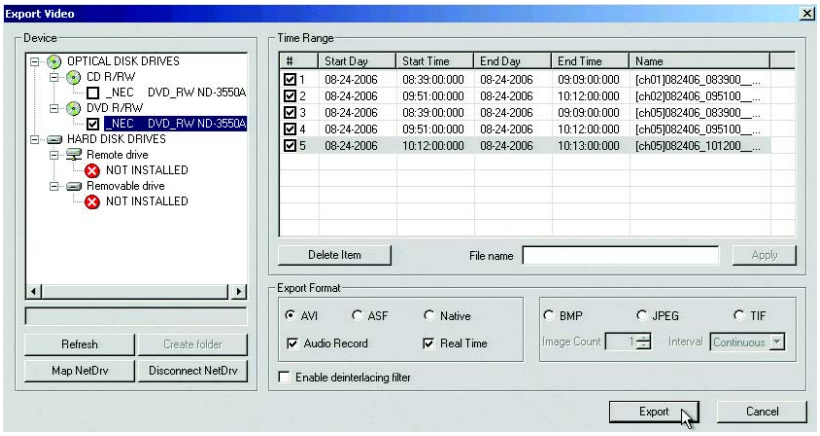

Figure 65. Selecting the Export Device and Time Ranges

INSERTING AND REMOVING A USB FLASH DRIVE

The DX8100 supports both USB 1.1 and USB 2.0 flash drives. To ensure data is not lost or corrupted when exporting data to a USB flash drive, follow the steps listed in *Removing a USB Flash Drive* on page 99.

This section describes how to insert and remove a USB device and includes the following topics:

- *Installing a USB Flash Drive* on page 99
- *Removing a USB Flash Drive* on page 99

INSTALLING A USB FLASH DRIVE

This section describes how to install a USB flash drive. To install a USB flash drive into the computer:

1. Insert the USB drive into the computer's USB 2.0 port.
2. Wait five seconds while the computer recognizes and automatically installs the device.

REMOVING A USB FLASH DRIVE

You can remove a USB device within the DX8100 environment. In this case, you do not have to exit to the Windows environment.

⚠ **WARNING:** Improperly removing a USB drive can cause data to be lost or corrupted.

To remove the USB flash drive from the computer, follow the Windows instructions applicable for your machine. For example, for Windows XP:

1. Click the Safely Remove Hardware icon in the task bar. The system displays a message to safely remove the USB device.
2. Click the Safely remove USB Mass Storage Device, Drive (G:) box. The system displays a confirmation message.
3. Remove the USB flash drive.

ENABLING THE DEINTERLACING FILTER

Images recorded at 4CIF at a low frame rate per second might move or tear. The DX8100 provides a global option for enabling deinterlacing filtering to enhance the exported image for 4CIF recorded channels. In this case, the exported image is converted to 2CIF resolution. This setting is effective for all channels, and cannot be set for enabling individual channels. For more information about viewing video in the deinterlaced mode, refer to *Viewing Video in the Deinterlaced Mode* on page 95.

To enable the deinterlacing filter:

1. Make sure the HVR is in Playback or Search mode by clicking the Live button or the Export button .
2. Click if you are in Live mode, or proceed to step 3 if you are in Search mode.
3. Click . The Export Video dialog box opens.
4. From the Export Format area, select the "Enable deinterlacing filter" check box.

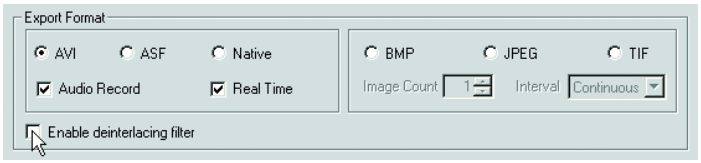

Figure 66. Enabling the Deinterlacing Filter from the Export Video Dialog Box

MAPPING AND DISCONNECTING A NETWORK DRIVE

You can export sections of prerecorded video to a network drive. The DX8100 allows you to map to or disconnect from a network drive. In this case, you must use the IP address of the target drive. The DX8100 allows you to use the host name of the target device. To do so, you must enable NetBIOS option in the Windows environment. You need to know what letters are already assigned to drives and the path to the folder you want to map.

This section describes how to map to and disconnect from a network drive, including the following topics:

- *Mapping a Network Drive*
- *Disconnecting a Network Drive*

MAPPING A NETWORK DRIVE

To map a network drive:

1. Make sure the HVR is in Playback or Search mode by clicking the Live button or the Export button .
2. Click the Forward button if you are in Live mode, or proceed to step 3 if you are in Search mode. Click the Export button . The Export Video dialog box opens.
3. Click Map NetDrv. The Map Network Drive dialog box opens asking for a drive letter and path.
4. In the Drive drop-down box, select a drive letter that is not being used.
5. Type the path in the Folder drop-down box. (For example, type **\\IP_address_of_server\folder_name**.)
6. (Optional) Click the "Reconnect at logon" box if you do not want the mapped drive to remain connected each time you logon.

7. Click Finish. The newly mapped drive is added as a remote drive and is displayed in the Device area. The mapped drive can now be accessed just like a local drive.

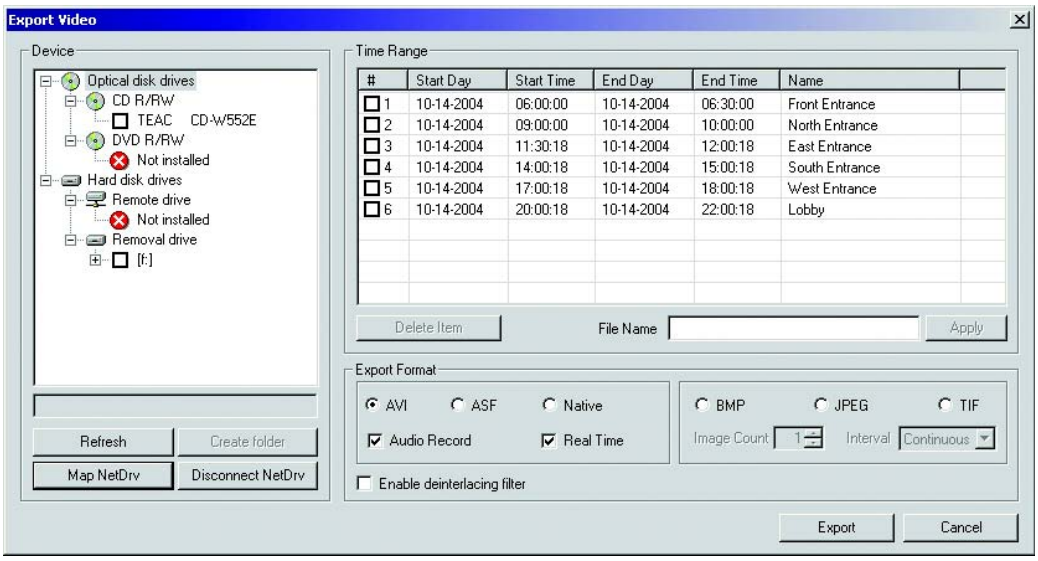

Figure 67. Export Video Dialog Box

DISCONNECTING A NETWORK DRIVE

To disconnect a network drive:

1. On the DX8100 toolbar, click the Search button . The DX8100 is in the Search mode.
2. Click the Export button . The Export Video dialog box opens.
3. Click Disconnect NetDrv. The Disconnect Network Drive dialog box opens.
4. Select the network drive that you want to disconnect.
5. Click OK. The drive is disconnected and removed from the Export Video dialog box Device area.

PERFORMING THE EXPORT

This section describes how to export data and includes the following topics:

- *Starting an Export Process*
- *Changing a Bookmarked Time Range* on page 103
- *Assigning a Custom Export Video File Name* on page 103
- *Selecting the Export Format* on page 105
- *Exporting a Sequence of Still Images* on page 106
- *Finalizing an Export Process* on page 107
- *Stopping an Export While in Process* on page 107
- *Working with DX8100 backed up Video* on page 108

STARTING AN EXPORT PROCESS

To start the export process:

1. Make sure the HVR is in Playback or Search mode by clicking the Live button or the Export button .
2. Click the Forward button if you are in Live mode, or proceed to step 3 if you are in Search mode.
3. Click the Export button . The Export Video dialog box opens.
4. Click the plus (+) sign next to a drive in the Device list. Available devices are indicated by a check box to the left of the device name.

5. Select the check box of the desired device. If you choose a remote device, select the drive and folder path where you would like to store the exported file. You can also click the Browse button to access the file system for the appropriate folder.

   If your DX8100 is connected to a network that supports shared folders and drives, you can map a network drive from within the Export Video dialog box. For more information, refer to *Mapping and Disconnecting a Network Drive* on page 100.

   Table Y describes the available devices.

Table Y. Available Backup Space

Type	Description
Optical drives	The DX8100 supports the following drives: • CD-R • DVD-R
Hard disk drives	The hard disk drive can be any of the following: • Local drives • Remote drives
Removable drives	USB flash drives

6. Select the check box of the video time range you want to export. You can export multiple time ranges simultaneously. For more information, refer to *Changing a Bookmarked Time Range* on page 103.
7. Click in the File Name box, and then type the file name for each selected video time range. You can accept the default file name assigned to the time range. For more information, refer to *Assigning a Custom Export Video File Name* on page 103.
8. Select the export format. For more information, refer to *Selecting the Export Format* on page 105.
9. Click Export.

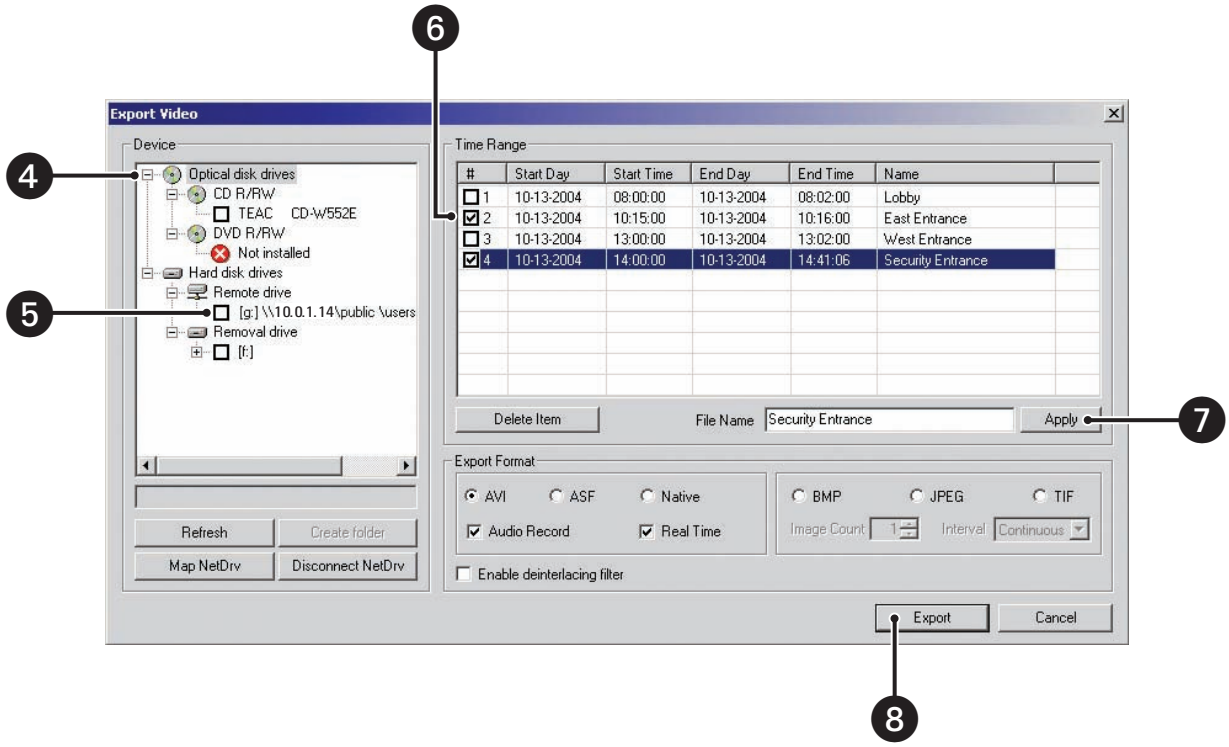

Figure 68. Exporting Selected Video

CHANGING A BOOKMARKED TIME RANGE

To change a bookmarked time range or create a new time range to be exported:

1. Select the desired row in the Time Range table.
2. Double-click the Start Day field, and then use the spinner buttons to set the start date for the export.

   The start days and times cannot be set later than end days and times.
3. Double-click the Start Time field, and then use the spinner buttons to set the start time for the export.
4. Double-click the End Day field, and then use the spinner buttons to set the end date for the export.
5. Double-click the End Time field, and then use the spinner buttons to set the end time for the export.
6. Select the check box next to each time range you would like to export.

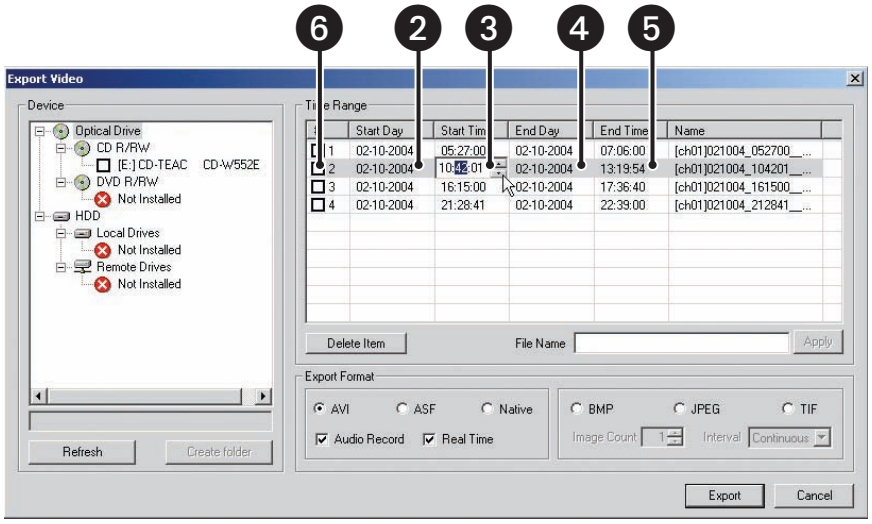

Figure 69. Export Time Range

ASSIGNING A CUSTOM EXPORT VIDEO FILE NAME

By default, the DX8100 assigns a file name to each time range. When the video channel selected is exported, the file is assigned the name appearing in the Name column.

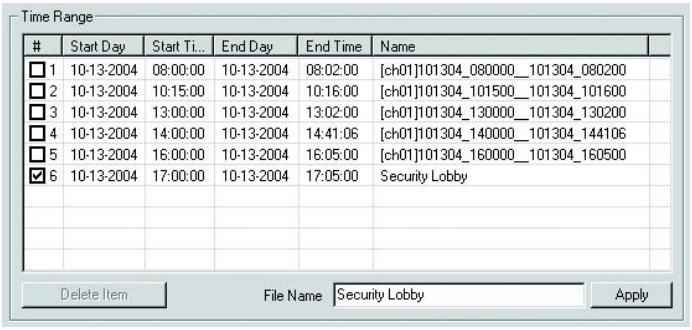

Figure 70. Default File Names

The default filename is constructed from the information displayed in the Start Day, Start Time, End Day, and End Time columns.

To assign a custom file name for a time range:

1. Verify that the check box of the row you want to rename is selected.
2. Enter a file name for the file you want to export. (Export file names follow standard Windows file-naming conventions.)
3. Click Apply. The Apply button updates the Name field.

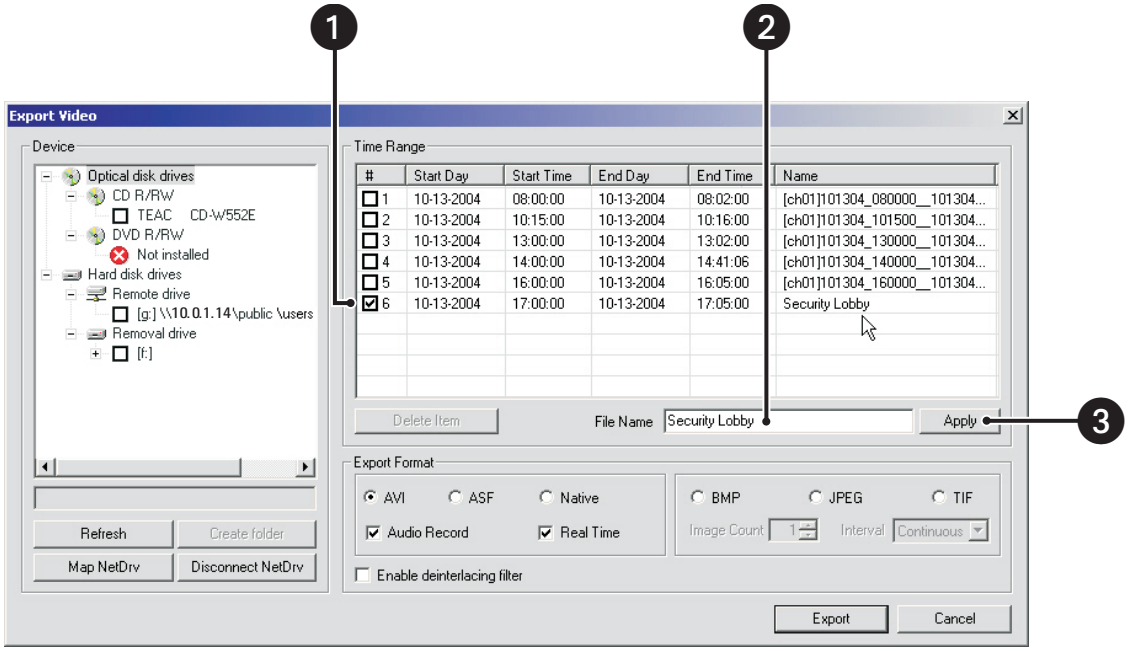

Figure 71. Renaming Export Time Ranges

SELECTING THE EXPORT FORMAT

The DX8100 allows you to select the export format. Table Z describes the available export formats.

- **Native format:** When exporting video in the native format, the DX8100 embeds a digital watermark in the video stream for the purpose of authentication. Watermarking ensures that an image has not been edited or damaged after it has been recorded. The watermark is an encrypted, digital signature embedded in the video stream during the compression stage, protecting the video from the moment of creation. The DX8100 Viewer software is capable of reading a DX8100 watermark and verifying the originality of the video.
- **AVI or ASF format:** Video exported in AVI or ASF format can be viewed using standard viewer software such as Windows Media Player.

  NOTE: Refer to the DX8100 product specification or DX8100 Client Operation/Configuration manual for recommended computer requirements for playing back exported video.

  When exporting video in the native format to a CD or DVD device, the DX8100 will automatically include the DX8100 Viewer application along with the video. This viewer is designed to play a variety of still image, video, and audio media formats, including the native DX8100 format. The DX8100 Viewer application will automatically run each time a CD or DVD created by the DX8100's export feature is inserted into a Windows-based computer. To ensure that the viewer software runs automatically after the disk has been inserted, verify that the auto-run feature of your computer's optical drive has not been disabled.

Table Z. Export Formats

Format	Description
AVI	Saves video sequence as a standard Windows video format.
ASF	Saves video sequence as a standard Windows media file.
Native	Saves video sequence using Pelco's engineered compression format. Native format provides increased compression and smaller file sizes.
BMP	Saves a still image file in standard Windows bitmap format. Only the first frame of the video sequence is saved.
JPEG	Saves a still image file in JPEG format. Only the first frame of the video sequence is saved.
TIF	Saves a still image file in TIF format. Only the first frame of the video sequence is saved

To select the export format:

- From the Export Video dialog box, select the radio button of the file format you want to export.

EXPORTING A SEQUENCE OF STILL IMAGES

Still image formats export the first frame of a bookmarked region, and then a single frame for each time interval until the number of images specified has been exported. For example, consider exporting a six-hour bookmarked region of video with an image count of 100 and a time interval of 3 seconds. The resulting export will include the first frame of the bookmarked region followed by 99 additional images taken at three second intervals. The first exported image will be the first frame of the bookmarked region and the last image will be the frame taken at 300 seconds into the bookmarked region.

To export a sequence of still images:

1. Select a still image format. Options are BMP, JPEG, and TIF.
2. Select the number of images (1-999) you want to save in the sequence.
3. Select the time interval between each saved image in the sequence. Options are as follows:
   - Continuous
   - 0.5 seconds
   - 1 second
   - 2 second
   - 3 second
   - 4 seconds
   - 5 seconds

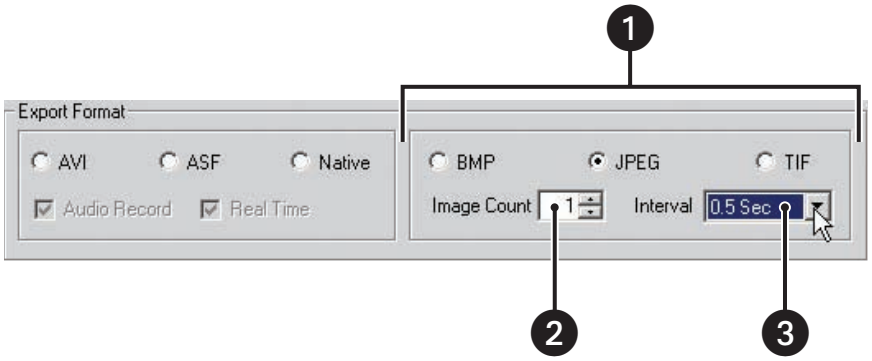

Figure 72. Still Image Export Formats

FINALIZING AN EXPORT PROCESS

This section describes how to finalize an export process. The following guidelines are applicable:

- Audio export is available only with DX8100 native, AVI, and ASF video formats.
- Real Time setting applies only to DX8100 native, AVI, and ASF video formats.
- When the Real Time check box is selected, the DX8100 will export video so it can be played back in real time (30 fps) for the same length of time as the original recording. For example, if video was recorded at 1 fps, this means the DX8100 will insert 29 null frames for every one frame of actual video. Thus, one minute of video recorded at 1 fps (60 frames total) will play back for one minute at 30 frames per second (60 frames of actual video interspersed with 1,740 null frames). If the Real Time check box is not selected, one minute of video recorded at 1 fps will play back in two seconds in real time.

  Figure 73 illustrates the two video streams: 1) one padded with null frames to match the actual time duration and 2) another stream without null frames.

Figure 73. Real Time Versus Non-Real Time Export

To finalize the export process:

1. Make sure that the export media selected is inserted in the drive unit that the drive is ready.
2. In the Time Range table, click selection box for each backed-up video time range you want to export.
3. In the Export Format section, do the following:
   a. Click the Audio Record check box to include recorded audio.
   b. Click the Real Time check box to export video using standard clock time.
4. Click Export to export video data.

STOPPING AN EXPORT WHILE IN PROCESS

Once an export operation has begun, a user can easily stop it by interrupting or canceling the operation from the Export menu on the main or search screens. Interrupting an export simply stops the progress of the export while keeping all current video information intact. Canceling an export will delete any video data exported during the operation, as well as end the export itself.

This section describes how to stop an export process and includes the following topics:

- *Retaining Video When Stopping an Export Process*
- *Deleting Video Data When Stopping an Export Process*

Retaining Video When Stopping an Export Process

To halt an export that is in process while retaining current video data stored:

- From the DX8100 menu bar, choose Export > Interrupt Export.

Deleting Video Data When Stopping an Export Process

To halt an export that is in process and delete any current video data stored:

- From the DX8100 menu bar, choose Export > Cancel Export.

WORKING WITH DX8100 BACKED UP VIDEO

The DX8100 allows you to view, search, export, back up, and print backed up video. To do so, you must use the DX8100 Client application.

For more information about viewing backed up video, refer to *Working With Backed Up Video On the Client* on page 165.

Working with System Health Status

This section describes how to work with the system health status feature and includes the following topic:

- *Viewing System Health Status*

VIEWING SYSTEM HEALTH STATUS

The system health feature allows you to view the health status for various system devices. If a threshold is exceeded, the system displays an alert notification. You can elect to open a subsequent event log, which provides a more detailed description about the event. The system devices are as follows:

- CPU temperature
- Fan speed
- Power supply status
- Self-Monitoring Analysis and Reporting Technology (SMART) for hard disk drive status
- Network information
- Uninterruptible power source (UPS) status when connected

  NOTE: The UPS area is reserved for future use.

An alert notification also appears on the remote client computer. For this to occur, the remote client must be connected to the server to receive the notification.

WORKING WITH SYSTEM HEALTH STATUS VIEW

To access the System Health dialog box:

1. From the DX8100 menu bar, click View > System Health View.

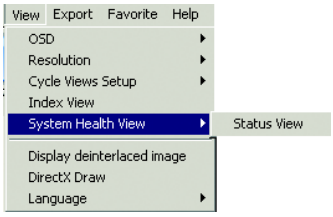

Figure 74. System Health View Submenu

2. On the submenu, select Status View. The System Health dialog box opens.

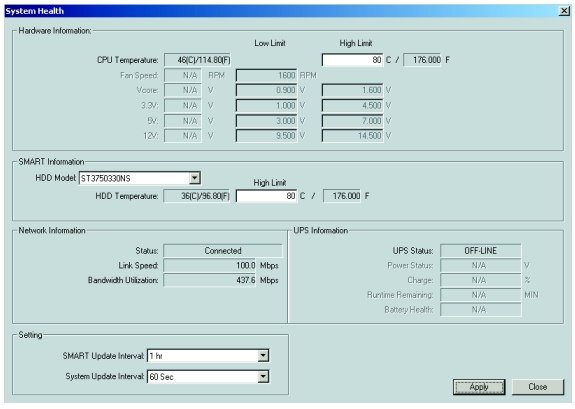

Figure 75. System Health Dialog Box

Setting Up the DX8100

Only a single user with Administrator or Power User access is allowed to access a DX8100's Setup mode at one time. When connected to a network supporting multiple HVRs and clients, users with Administrator access override and block Power Users. If two users with the same access level attempt to enter Setup mode simultaneously, the DX8100 will allow access to setup features on a first-come, first-served basis. Unavailable setup options will be grayed out.

This section describes the Setup Mode and includes the following topics:

- *Accessing the Setup Mode*
- *Understanding the Setup Dialog Box* on page 111
- *Camera Setup* on page 112
- *IP Camera Setup* on page 118
- *Link Setup* on page 128
- *Schedule Setup* on page 139
- *Setting Up Network Properties* on page 164
- *Data Backup Setup* on page 165
- *User Setup* on page 168
- *Site Setup* on page 174
- *System Setup* on page 174
- *External Monitor Setup* on page 178
- *Emergency Notification Setup* on page 178
- *Emergency E-Mail Notification Setup* on page 180

ACCESSING THE SETUP MODE

The Setup Mode is accessed from the DX8100 toolbar by clicking the Setup icon. When clicked, the Setup icon opens the Setup dialog box in the DX8100 view panel. Major configuration categories are displayed on individual tabbed pages. Each configuration page contains all of the options and parameters for the respective functions, which allows you to customize how the DX8100 operates for your particular application. To access a setup page, click the icon displayed on the right side of the view panel.

The Setup dialog box allows Administrators and Power Users access to the DX8100's setup functions. However, only Administrators can define user names and passwords for new users.

To access the Setup Mode, click the Setup button on the DX8100 toolbar. The Setup dialog opens to the Camera page.

To access a Setup page, click a setup button in the DX8100 Setup dialog box. The selected setup page appears.

For information about the Setup dialog, refer to *Understanding the Setup Dialog Box* on page 111.

UNDERSTANDING THE SETUP DIALOG BOX

The Setup dialog box opens in the DX8100 view panel to the default Camera page. You can only view video in the Camera page. You must exit the Setup dialog box to access the DX8100 functions in the main window. Figure 76 shows the parts of the Setup dialog.

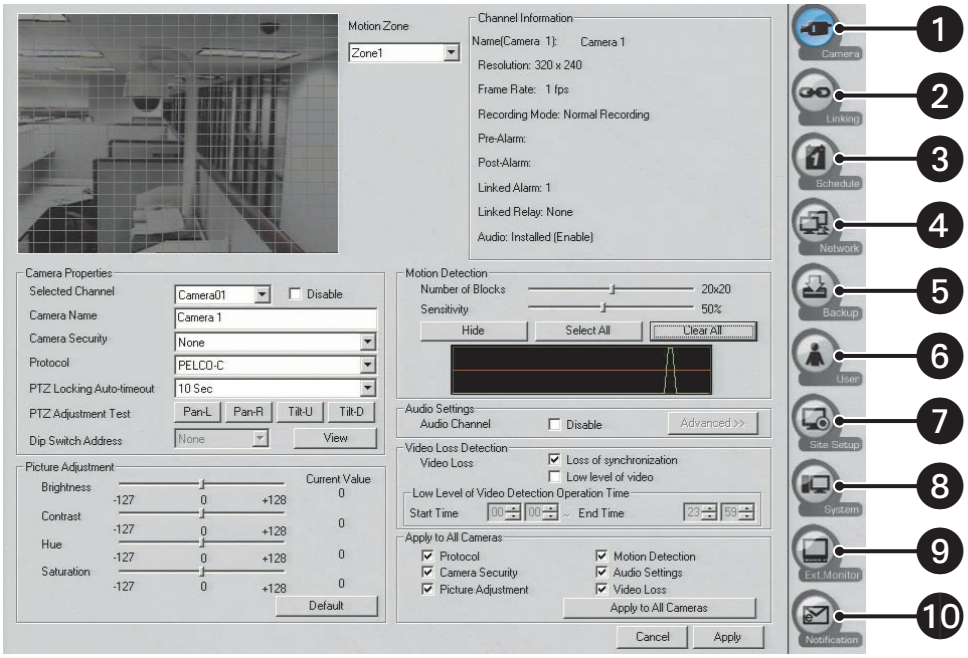

Figure 76. Parts of the DX8100 Setup Dialog Box

Table AA describes the parts of the Setup dialog.

Table AA. Parts of the DX8100 Setup Dialog Box

Item	Button	Part	Description
❶		Camera	Click the Camera button to configure cameras. Available options are PTZ functions, motion detection, picture adjustment, audio, and video loss detection settings.
❷		Linking	Click the Linking button to configure relays and alarms, associate relays and alarms with cameras, link relays to alarms, and link cameras to other cameras.
❸		Schedule	Click the Schedule button to build custom recording schedules, set image resolution, frame rate, and image quality, and configure relay settings.
❹		Network	Click the Network button to set up the network configuration and communication port settings.
❺		Backup	Click the Backup button to configure and perform backups.
❻		User	Click the User button to add, delete, or change user accounts.
❼		Site	Click the Site Setup button to add, delete, and configure additional DX8100 Series HVRs.
❽		System	Click the System button to set up additional system options.
❾		Ext. Monitor	Click the Ext. Monitor button to configure an additional display monitor. (This button appears only if the optional display card has been installed.)
❿		Notification	Click the Notification button to configure emergency agent and e-mail notification options.

CAMERA SETUP

Up to 32 video cameras can be connected to the unit. Only an Administrator or Power User can configure cameras.

This section describes how to setup the camera and includes the following topics:

- *Basic Camera Setup*
- *Motion Detection Setup* on page 114
- *Audio Setup* on page 115
- *Configuring Video Loss Detection* on page 117
- *Applying Settings to All Cameras* on page 118
- *IP Camera Setup* on page 118

BASIC CAMERA SETUP

This section describes how to set up an analog camera. For information about setting up an IP camera, refer to *IP Camera Setup* on page 118.

To set up camera picture and PTZ options:

1. Do one of the following:
   - On the DX8100 toolbar, click the Setup button . The Setup dialog opens to the Camera page.
   - If the Setup dialog box is already open, click the Camera button . The Camera page is displayed.
2. In the Camera Properties section, do the following:
   a. Select a camera from the Selected Channel drop-down box. Alternately, you can click a camera in the Site Tree to select it.
   b. Verify that Local Camera is displayed in the associated Selected Channel drop-down box.
   c. (Optional) To disable an analog camera, select Disable in the associated Selected Channel drop-down box.
   d. Enter an optional new name in the Camera Name box for the camera. Camera names can be up to 32 characters long and can include spaces and special characters. The Camera Name box cannot be left blank or have any spaces. If a valid name is not entered in the Camera Name box when you click Apply, the previous name is displayed.
   e. Set camera security level. The default security levels are as follows:
      - **None:** The camera can be viewed by all users.
      - **Low:** The camera can be viewed by all users except the Guest account.

        NOTE: If you do not want video from a low security level camera to be viewed by the Guest user, set the security level for that cameras to medium or higher.
      - **Medium:** The camera can be viewed by users with Standard User access and higher.
      - **High:** The camera can be viewed by users with Power User access and higher.
   f. In the Protocol drop-down box, select the appropriate PTZ protocol for the camera, or select No PTZ if the selected camera does not support PTZ functions. Some of the supported protocol options are as follows:
      - NO PTZ: Disables all PTZ functions for the current camera
      - PELCO-C: Coaxitron
      - PELCO-D: Pelco engineered
      - PELCO-P: Pelco engineered
      - SAMSUNG™ (V2.0)
      - PANASONIC®
      - VICON®
      - KALATEL™
      - Honeywell™ (HSD251)
      - American Dynamics™
      - Phillips® (TC8560, TC700 Series)
      - LG® (v1.0)

      You must configure one of the RS-422/RS-485 PTZ ports for Spectra for Coaxitron to function. For more information, refer to the DX8100 server Operations and Programming manual.

g. Do the following:

(1) In the PTZ Locking Auto-timeout drop-down box, select an appropriate timeout value. Timeout values can be set between five and 60 seconds. The default value is 10 seconds.

Because the DX8100 Series HVR is designed to operate in a networked environment, it is possible that multiple users may attempt to simultaneously control the PTZ features of a single camera. To minimize potential conflicts, only one user at a time is allowed to control the PTZ features of a camera. PTZ control is made available on a first-come, first-served basis. Once a user gains control of a camera's PTZ features, all other users are locked out. All other users must wait until the controls for that device have been left idle for the amount of time configured for that camera, as specified in the PTZ Locking Auto-timeout drop-down box.

(2) To perform a PTZ test, click Pan-L (left), Pan-R (right), Tilt-U (up), and Tilt-D (down), to verify that the camera responds to PTZ commands.

h. Set the selected camera address as follows:

(1) In the Dip Switch Address drop-down box, select an address from the available addresses. If the selected camera's protocol is set to NO PTZ or PELCO-C, the DIP Switch Address drop-down box is unavailable. In this case, the camera's dip switch setting cannot be set using software.

This option is available for cameras and protocols that support software-configured addresses. Only one address can be assigned per camera. The DX8100 displays an error message if you attempt to assign the same address to different cameras.

(2) To view the camera DIP switch address setting for all attached local cameras, click View. The DIP Switch Address View dialog box opens. The assigned DIP switch setting for all attached cameras is displayed.

3. In the Picture Adjustment section, adjust picture properties by moving sliders for Brightness, Contrast, Hue, and Saturation.

As you adjust the picture properties of a camera on the local HVR, changes will be reflected immediately in the view area near the top of the screen. Changes made to cameras at a remote site will not appear in the view area until you click Apply.

4. Click Default to return all picture property settings to the normal state.

You can click the Hide/Show button to clear the view area to get a better look at your picture property changes. Refer to step 2 in *Motion Detection Setup* on page 114.

5. Click Apply.

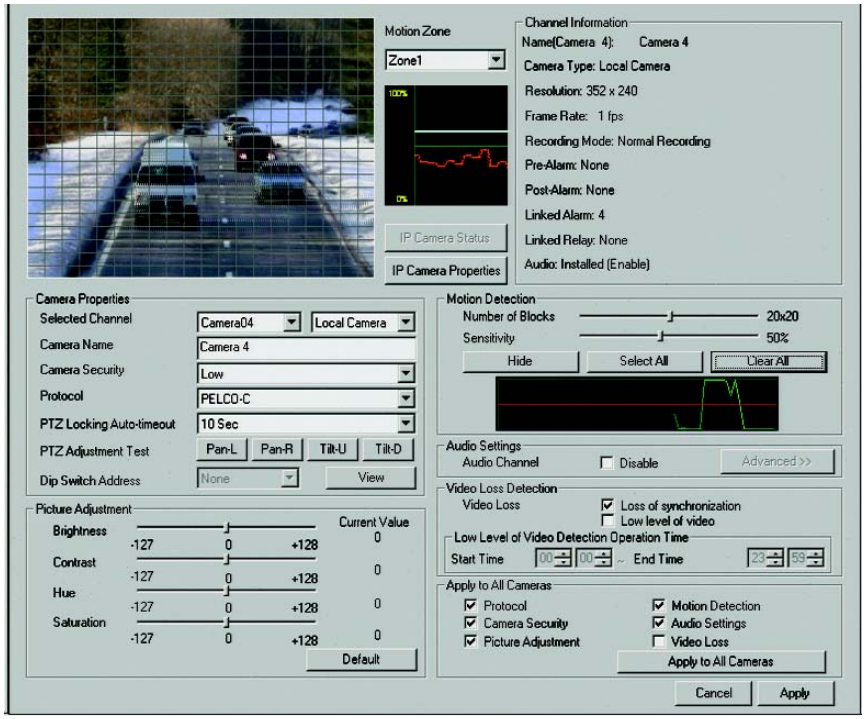

Figure 77. Camera Page

MOTION DETECTION SETUP

Up to five motion detection profiles can be defined for each camera. When the DX8100 is set to record motion detection, any motion sensed in the selected zone will be recorded on that channel. Motion detection can also be used to trigger relays, PTZ presets, and the recording of multiple cameras. Refer to *Schedule Setup* on page 139 and *Link Setup* on page 128 for more information.

To define motion detection profiles for the selected camera:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog opens to the Camera page.
2. To set up the motion grid, do the following:
   a. Select the motion zone (1-5) from the drop-down box.
   b. Click the Hide/Show button to either hide or display the motion grid.
   c. Move the Number of Blocks slider to change the grid size of the motion overlay.
3. Define the area for motion detection as follows:
   a. Click Clear All to remove the currently defined motion detection area.
   b. Click Select All to enable motion detection for the entire viewable area.
   c. Hold down the *left* mouse button and drag to *select* areas.
   d. Hold down the *right* mouse button and drag to *deselect* areas.
4. In the Motion Detection section, move the Sensitivity slider to adjust motion sensitivity. Moving the slider to the left decreases the sensitivity; moving the slider to the right increases the sensitivity. The motion sensitivity window provides a visual indicator that helps you set the sensitivity to the correct level, so that erroneous motion events caused by wind or other disturbances are avoided.
   - Figure 78 shows the position of the red sensitivity indicator at a low sensitivity setting. In this case, a large motion level is needed to cause the green motion indicator to exceed the red sensitivity indicator.

Figure 78. Low Sensitivity Level

   - Figure 79 shows the position of the red sensitivity indicator at a high sensitivity setting. In this case, a low motion level will cause the green motion indicator to surpass the red sensitivity indicator.

Figure 79. High Sensitivity Setting Level

   - Figure 80 shows the position of the red sensitivity indicator at a medium 50% sensitivity setting (default). In this case, a motion event is large enough to cause the green motion indicator to surpassed the red sensitivity indicator.

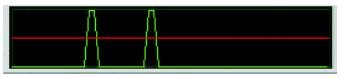

Figure 80. Adequate Sensitivity Level

5. Click Apply.

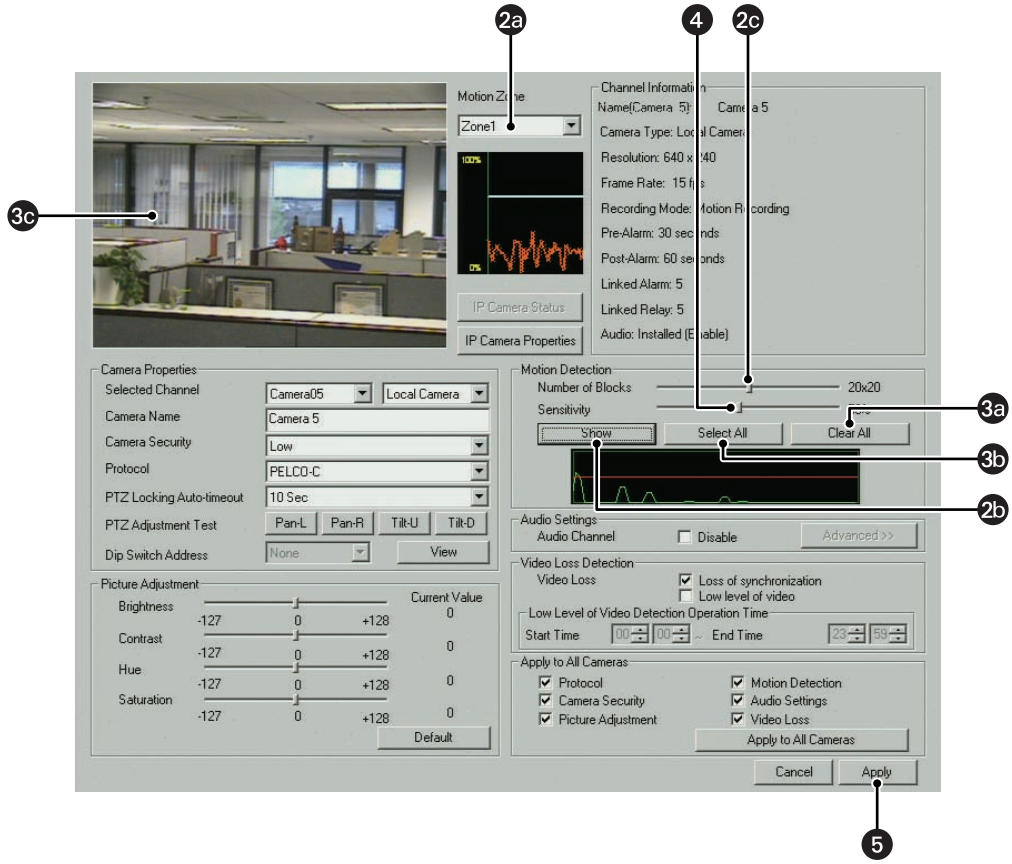

Figure 81. Camera Motion Detection Setup

AUDIO SETUP

The DX8100 server supports two audio configurations: standard audio and optional expanded audio. Both of these configurations allow you to configure individual camera channels to listen to and record live audio. You can monitor live audio at a local server or listen to live audio from a remote DX8100 server or client system. You can play back audio recorded by a camera channel. For information about listening to live audio at the server or client system, refer to on page 68.

NOTE: Live audio is not supported for IP cameras.

- Standard audio input: The DX8100 provides two standard audio inputs: Line In (stereo), Mic In (mono), and one audio output. The standard audio inputs are available by default if the optional audio option card is not installed. If the optional audio card is installed, the standard audio inputs are disabled.

  The standard audio connections are described as follows:

  - **Line In (stereo):** A 2-channel stereo input (left and right channel) allows you to connect up to two external audio sources. You can assign a specific camera to record video in association with each audio channel. For example, you can assign camera 2 to the left audio channel and camera 32 to the right audio channel.
  - **Mic In:** Accepts one audio input. You can assign one camera to record video in association with the audio input.
  - **Audio output:** Allows you to connect an audio output device, such as an amplifier, to listen to recorded video and audio simultaneously.
- Optional expanded audio input: To use the DX8100 expanded audio feature, the optional DX8100-AUD audio card must be installed. You can determine if the audio card is installed by checking the Audio option status in the Channel Information section of the Camera page. The Audio status is one of the following:
  - **Not installed:** If the optional audio card is not installed, the Advanced button in the Audio Settings area is available.
  - **Installed (enabled):** If the optional audio card is installed, the Advanced button in the Audio Settings area is not available.

The DX8100 compresses audio data to save space. In this case, recorded audio that may not be of the same quality as live audio. Consult your Pelco sales representative for more information regarding the DX8100-AUD option.

This sections describes how to setup the audio feature and is organized into the following sections:

- *Setting Up the Standard Audio Options*
- *Setting Up the Expanded Audio Options* on page 117
- *Listening to Live Audio at the Client* on page 53

Setting Up the Standard Audio Options

By default, the DX8100 supports two standard audio inputs if the expanded audio card is not installed. If the expanded audio card is installed, the two standard audio inputs are disabled.

To set up the standard audio options:

1. Connect the audio input source to the DX8100. For information about connecting an audio source to the DX8100, refer to the DX8100 Installation manual.
2. On the DX8100 toolbar, click the Setup button . The Setup dialog opens to the Camera page.
3. In the Channel Information area, verify that expanded audio option is not installed. This is indicated by the label Audio: Not Installed.

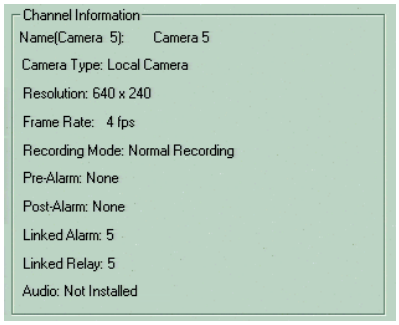

Figure 82. Audio Option Not Installed

4. In the Audio Settings area, click Advanced >>. The AUX Audio Settings dialog box opens.
5. In the AUX Audio Settings dialog box, do the following:
   a. Click to deselect the Audio Disable check box.
   b. In the Input Device drop-down box, select Mic (single channel only) or "Line in" (two standard channels).
   c. Click the Left Channel check box and in the drop-down box, select an associated camera.
   d. Click the Right Channel check box and in the drop-down box, select an associated camera.
   e. (Optional) Left-click the Aux volume control and drag left to decrease the audio input level or to the right to increase the audio input level.
   f. Click OK.
   g. Click Apply.

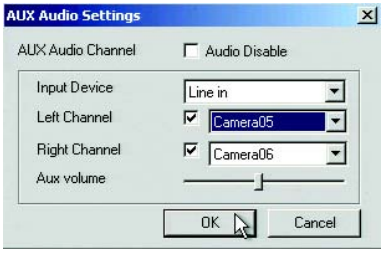

Figure 83. AUX Audio Settings Dialog Box

Setting Up the Expanded Audio Options

To set up the expanded audio option:

1. Do the following:
   a. Install the optional DX8108-AUD/DX8116-AUD audio card (if necessary). For information about installing the optional DX8108-AUD/DX8116-AUD audio card, refer to the DX8100 8/16 Channel Audio Card Installation manual.
   b. Connect an audio input device (microphone) to the numbered DX8108-AUD/DX8116-AUD audio card input for the camera channel being configured for live audio recording.
   c. To hear live audio at the local server, connect head phones to the DX8100 audio output connector.
2. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
3. Check the Channel Information section to verify that the audio option is installed and available.
4. In the Camera Properties section, select the camera channel you want to configure for live audio recording.
5. In the Audio Settings section, verify that the Audio Disable check box is not selected.
6. Click Apply.
7. Verify that you can hear sound from the DX8100 audio output.

For information about listening to live audio, refer to *Listening to Live Audio at the Client* on page 53.

CONFIGURING VIDEO LOSS DETECTION

You can configure the DX8100 to monitor each camera for the following events:

- **Loss of synchronization:** This event occurs if the data cable between the camera and DX8100 is disconnected (cable is cut or unplugged) or when the camera looses power.
- **Low level of video:** This event occurs if the DX8100 detects a low level of video signal from the camera:
  – The available light source for the camera (indoor/outdoor lightly) is greatly diminished.
  – The DX8100 data cable is disconnected.

  You can adjust the operation time from 0:00 to 23:59. For example, if the start time is 6:00 and the end time is 18:00, a low video level event from 18:01 to 5:59 will not be detected. The low video level detection time option is only available when the low level of video option is selected.

The DX8100 also stores a video incident as a video loss recovery event. The status provides the start and restore time for the video loss event.

The DX8100 allows you to select the loss of synchronization and low level of video option independently.

- The PTZ camera and multiple relay output can be mapped to a video loss event.
- Multiple cameras can be configured to record in response to a video loss event.
- The DX8100 can be configured to use emergency agent notification. In this case, the last available video image at the time the event occurred is sent to the designated remote client. If no image exist, then the system attaches a red colored pane to the e-mail. The red pane contains the text "Video Loss." For information about setting up emergency notification, refer to *Emergency Notification Setup* on page 178.
- The DX8100 can be configured to send an e-mail notification in response to a video loss event. In this case, the last available video image at the time the event occurred is attached to the e-mail. If no image exist, then the system attaches a red colored pane to the e-mail. The red pane contains the text "Video Loss." For information about setting up emergency notification, refer to *Emergency E-Mail Notification Setup* on page 180.
- The record icon turns purple indicating a video loss recording, regardless of the schedule. The video loss utility is constantly running in the background. If a schedule is not available, the record icon defaults to purple. If the DX8100 loses feed, video on that channel is recorded.

To set up video loss detection:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog opens to the Camera page.
2. In the Video Loss Detection section, do one or both of the following:
   - Click the "Loss of synchronization" check box.
   - Click the "Low level of video" check box.
   - In the Low Level of Video Detection Operation Time section, set the Start Time and the End Time.
3. Click Apply.

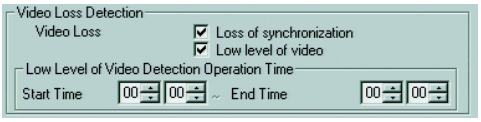

Figure 84. Video Loss Detection

APPLYING SETTINGS TO ALL CAMERAS

If you want to keep the changes you made to options and parameters on the Camera page, you must click Apply. If you attempt to leave the Camera page, the system will display a message box, prompting you to apply, not apply, or cancel the changes.

To apply camera configuration options to all attached cameras:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog opens to the Camera page.
2. Perform the camera configuration.
3. In the Apply to All Cameras section, select the check boxes for one or more of the settings you want to apply to all cameras: Protocol, Camera Security, Picture Adjustment, Motion Detection, Audio Settings, and Video Loss.
4. Click Apply to All Cameras.
5. Click Apply.

IP CAMERA SETUP

This section describes how to configure IP cameras and is organized into the following sections:

- *Configuring the DX8100 to Record IP Camera Video* on page 119
- *Disabling an IP Camera* on page 126
- *Deleting an IP Camera* on page 127
- *Restoring a Disabled Analog or IP Camera* on page 127

For information about the supported IP cameras, refer to the DX8100 Series HVR Version 2.0 Release Notes. To access this document, go to http://www.Pelco.com and navigate to the Hybrid Video Recorders page.

CONFIGURING THE DX8100 TO RECORD IP CAMERA VIDEO

The DX8100 allows you to assign an IP camera to a designated channel. Initially, camera channels above the DX8100 standard analog channels are not displayed in the Site Tree. These channels are listed in the Selected Channel drop-down box located on the Camera page. Each IP camera configured as a network camera is displayed in the Site Tree.

The steps for configuring the DX8100 to record IP camera video are organized into the following topics:

- *About Analog and IP Camera Channel Configurations*
- *Searching for IP Cameras*
- *Assigning an IP Camera to a Camera Channel* on page 120
- *Configuring IP Camera Settings* on page 122
- *Customizing IP Camera Display Settings* on page 123

About Analog and IP Camera Channel Configurations

The DX8100 channel configuration is as follows:

- **Standard analog channel:** The DX8108 and DX8116 channel capacity can be expanded by 16 channels using the DX8100 16-channel expansion unit kit.
  - **DX8108 channel configuration:** Camera channels 1 to 8 are standard analog inputs and are displayed in the Site Tree; channels 9 to 24 (sixteen total) are available for assigning IP cameras.
  - **DX8116 channel configuration:** Camera channels 1 to 16 are standard analog inputs and are displayed in the Site Tree; channels 17 to 32 (sixteen total) are available for assigning IP cameras.
  - **DX8124 channel configuration:** Camera channels 1 to 24 are standard analog inputs and are displayed in the Site Tree; channels 25 to 32 (eight total) are available for assigning IP cameras.
  - **DX8132 channel configuration:** Camera channels 1 to 32 are standard analog inputs and are displayed in the Site Tree. Analog channels must be disabled to assign an IP camera.

  NOTE: For information about the supported resources for configuring analog and IP cameras, refer to DX8100 Series HVR Version 2.0 Release Notes.

- **Disabling an analog or IP camera results in the following conditions:**
  - Frees up system CPU and memory resources.
  - Video from the disabled channel is no longer available for recording.
  - Settings specific to the disabled camera are preserved.
  - The IP camera is not removed from the IP Camera Properties dialog box.

For information about disabling a camera, refer to *Disabling an Analog Camera* on page 126 or *Disabling an IP Camera* on page 126. For information about restoring a camera, refer to *Restoring a Disabled Analog or IP Camera* on page 127.

For information about DX8100 supported analog and IP camera capacity, refer to DX8100 Series HVR Version 2.0 Release Notes. To access this document, go to http://www.Pelco.com and navigate to the Hybrid Video Recorders page.

Searching for IP Cameras

NOTES:

- The scan utility is a DX8100 server-based feature and discovers IP cameras within the DX8100 network. The scan utility is not available in the Client application.
- If Axis® IP cameras are on the network, the IP Camera Properties dialog scan utility might not discover all available IP cameras. The scan utility discovers Sarix cameras but does not discover other IP cameras (IP110, IP3701, Axis 211, and Axis 231D+).
- The scan utility discovers Axis and Pelco IP cameras if Sarix cameras are not on the network.

1. On the DX8100 toolbar, click the Setup button . The Setup dialog opens to the Camera page.
2. Click IP Camera Properties. The IP Camera Properties dialog box appears.

3. To search for IP cameras connected to the network:
   - **Using the IP Camera Properties dialog box scan utility:** The scan utility locates Pelco IP devices, IP cameras, and Axis IP cameras.

     NOTE: The DX8100 Client application IP Camera Properties scan utility is unavailable.

     (1) Click Scan. The IP Camera Searching dialog box appears.

     (2) After the IP Camera Searching dialog box closes, the IP scan results are displayed in the scan table.

     NOTE: The scan results are cleared if the IP Camera Properties dialog box is closed.

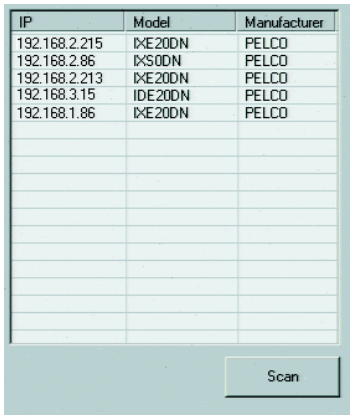

Figure 85. DX8100 Scan Utility Results

   - **Using the Pelco Device Utility:** For information about installing the Device Utility, refer to Utility Device for Pelco IP Cameras manual.

     NOTE: Install the Device Utility only on a remote computer. Do not install it on the DX8100 server.

     (1) On a remote computer, start the Pelco Device Utility and allow the Device Utility to discover IP devices on the network.

     (2) Search the Device Utility IP Address column for supported IP camera devices. For information about the supported IP cameras, refer to DX8100 Series HVR Version 2.0 Release Notes. To access this document, go to http://www.Pelco.com and navigate to the Hybrid Video Recorders page.

4. Note the IP address and model number of the supported IP cameras to be configured.
5. Assign each IP cameras to a DX8100 camera channel (refer to *Assigning an IP Camera to a Camera Channel* on page 120).

Assigning an IP Camera to a Camera Channel

The DX8100 allows you to select the video format and recording stream. The MPEG4 codec (video format) setting allows you to select the primary or secondary stream. The MJPEG codec setting only supports the primary stream.

- **Pelco IP cameras (IP110, IP3701, Spectra IP, and Spectra Mini IP):** These cameras record as follows:
  - Primary stream: 4CIF 30 ips
  - Secondary stream: CIF 15 ips
- **Pelco IX and IXE Series network cameras with Sarix™ technology:** The resolution, frame rate, and bit rate can be adjusted.
- **Axis Communications® Axis 211 or Axis 232D:** Frame rates are selectable from 1 to 30 ips; resolutions are selectable from 640x480, 480x360, 320x240, 240x810, or 160x120.

1. On the DX8100 toolbar, click the Setup button . The Setup dialog opens to the Camera page.
2. Click IP Camera Properties. The IP Camera Properties dialog box appears.

3. To assign an IP camera to a camera channel, do one of the following:
   - **Manual assignment:**
     (1) Click a check box to select a camera.
     (2) Click the Manufacturer drop-down box and select a manufacturer. The port number, compression method, and video stream settings automatically appear in the camera row.

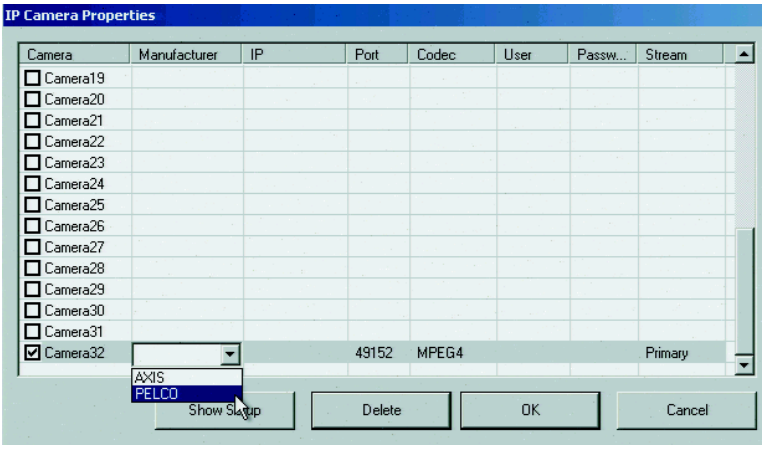

Figure 86. Manually Entering IP Camera Data

(3) Click the IP drop-down box and enter the camera's IP address.

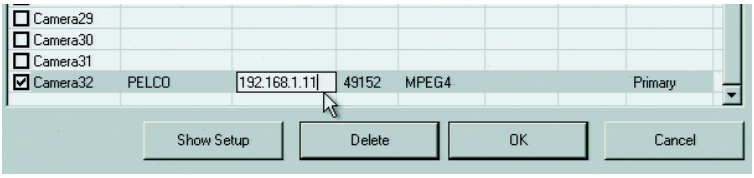

Figure 87. Manually Entering IP Camera Data

- **Automated assignment:**
  (1) Click Scan. Available IP devices appear in the Scan table.
  (2) Click a supported IP camera.
  (3) Click the Add button . The Connect dialog box opens.
  (4) In the Connect drop-down box, click a camera.
  (5) Click Apply. The selected camera is assigned to the designated camera channel.

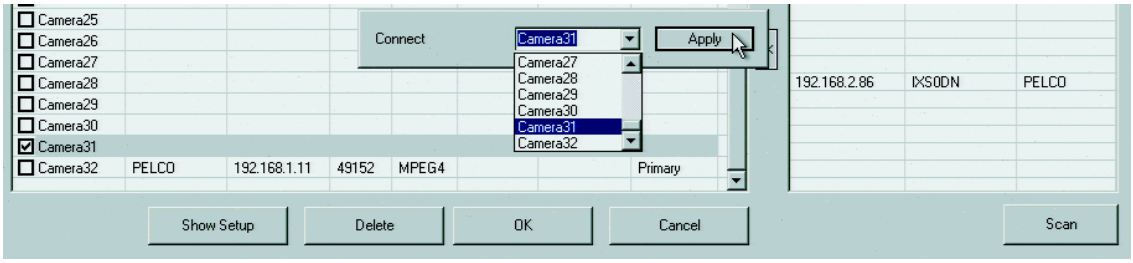

Figure 88. Automated Assignment of an IP Camera

4. (Optional) MPEG-4 is the default codec. Double-click the Codec drop-down box to select a different compression.
5. Double-click the User box and enter the user name.
6. Double-click the Password box and enter the password.

7. The DX8100 allows you to select the IP camera stream that the unit uses to record video.
   - **Stream 1:** Primary is the default stream. It supports a higher resolution and image rate.
   - **Stream 2:** Stream 2 supports a lower resolution and image rate.

   NOTE: For information about supported resolution and image rates, refer to *DX8100 Series HVR Release Notes*. To access this document, go to http://www.Pelco.com and navigate to the Hybrid Video Recorders page.

   Double-click the Stream drop-down box to select the secondary stream.

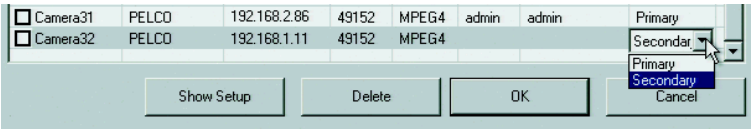

Figure 89. Entering the User Name, Password, and Stream

8. Repeat step 2 to 7 to associate additional IP cameras with other camera channels.
9. Click OK. The channel assignments are saved and the Camera page appears.
10. (Optional) To adjust IP camera settings, refer to *Configuring IP Camera Settings*. Otherwise, refer to *Customizing IP Camera Display Settings* on page 123.

Configuring IP Camera Settings

For Pelco IP cameras, use the IP Camera Properties dialog box, the Web browser running on the DX8100 Client computer, or the Device Utility.

For Axis IP cameras, use the Web-based Axis interface. For information about configuring Axis camera settings, refer to the Axis documentation that came with the camera.

Using the IP Cameras Properties Dialog to Configure IP Cameras

1. On the DX8100 toolbar, click the Setup button . The Setup dialog opens to the Camera page.
2. Click IP Camera Properties. The IP Camera Properties dialog box appears.
3. Click a check box to select an IP camera channel. The Show Setup button is available.
4. Click Show Setup. The IP Camera Properties setup content area appears and the Web browser accesses the IP camera's Settings page.

Figure 90. Pelco IP110 General Tab

5. Configure the IP camera settings.
6. Log out of the IP camera. A login dialog box appears.
7. Click Hide Setup.

8. Click OK. The camera settings are saved and the DX8100 Camera page appears.
9. Set up the IP camera to be displayed in the DX8100 Site Tree (refer to *Customizing IP Camera Display Settings* on page 123).

Using the Device Utility to Configure IP Cameras

1. Run the Device Utility on a remote computer and configure the IP camera settings.
2. Set up the IP camera to be displayed in the DX8100 Site Tree (refer to *Customizing IP Camera Display Settings* on page 123).

Customizing IP Camera Display Settings

The Camera page allows you to customize the IP camera display settings. Perform this step after the IP camera is assigned to a camera channel.

NOTE: The IP camera's status is automatically set to "Network Camera" when it is assigned to a camera channel, and assumes the default camera settings for that channel.

For information about assigning an IP camera to a camera channel, refer to *Assigning an IP Camera to a Camera Channel* on page 120.

For information about removing an IP camera from the Site Tree, refer to *Disabling an IP Camera* on page 126.

To customize an IP camera's display settings:

1. If the Camera page is not displayed, click the Setup button on the DX8100 toolbar. The Setup dialog opens to the Camera page.
2. In the Camera Properties section:
   a. Select an IP camera from the Selected Channel drop-down box.
   b. Verify that the IP cameras is set to Network Camera in the related Selected Channel drop-down box.
   c. (Optional) To disable an IP camera, refer to *Disabling an IP Camera* on page 126. To disable an IP camera, refer to *Disabling an IP Camera* on page 126.
   d. Enter an optional new name in the Camera Name box.

      Camera names can be up to 32 characters long and can include spaces and special characters. The Camera Name box cannot be left blank or have any spaces. If a valid name is not entered in the Camera Name box when you click Apply, the previous name is displayed.

   e. Select the appropriate PTZ protocol setting. Select No PTZ if the selected IP camera does not support PTZ; select Network Camera PTZ if the IP camera supports PTZ.
3. Select an appropriate timeout value.
4. Adjust picture properties by moving the sliders for Brightness, Contrast, Hue, and Saturation.

   As you adjust the picture properties of a camera on the local HVR, changes are reflected immediately in the viewing area near the top of the screen. Changes made to cameras at a remote site do not appear in the viewing area until you click Apply.
5. Click Default to return all picture property settings to the normal state.
6. Click Apply. The IP camera is added to the Site Tree.

7. Verify that the IP camera resolution is displayed in the Site Tree and Channel Information area.

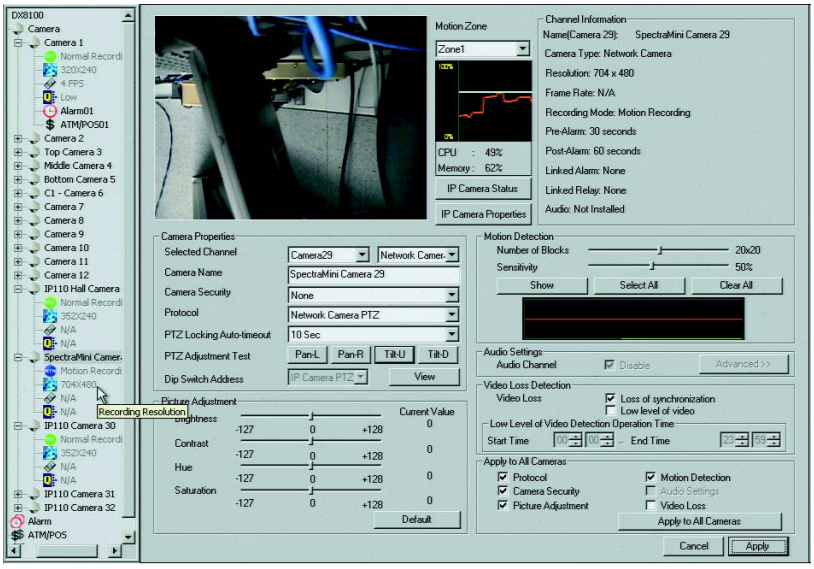

Figure 91. Viewing IP Camera Settings

8. In the Site Tree, click the IP camera. The IP camera video is displayed in the Camera page preview window.
9. Verify that the CPU (orange) and Memory (blue) levels are within the DX8100 Resource Meter's 0 to 100 percent range. If either level exceeds 100 percent, a warning dialog box appears.

   Click the check box to disable future DX8100 System Resources Warning dialog boxes. If the unit is restarted, the DX8100 System Resources Warning dialog box is enabled again.

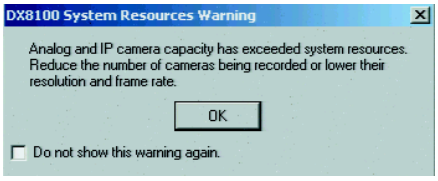
DX8100 System Resources Warning
Analog and IP camera capacity has exceeded system resources. Reduce the number of cameras being recorded or lower their resolution and frame rate.
OK
Do not show this warning again.

Figure 92. DX8100 System Resources Warning Dialog Box

   To configure the analog and IP cameras to bring the CPU or Memory level within range:

   a. (Optional) Click the check box to disable the DX8100 System Resources Warning dialog box.

   b. Go to *Configuring Analog and IP Cameras for Optimal Hybrid Video Recording* on page 126.

10. Verify that the IP camera is communicating with the DX8100. Click IP Camera Status. The IP Camera Network Status dialog box appears and displays the IP camera's status.
11. Click OK.
12. Click Apply.
13. On the DX8100 toolbar, click the Setup button . The DX8100 application window appears.
14. Drag the newly configured IP camera to a camera pane.

UNDERSTANDING THE DX8100 RESOURCE METER

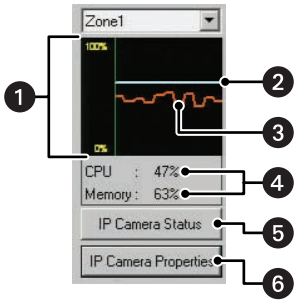

Figure 93. DX8100 Resource Meter

Table AB describes the parts of the DX8100 Resource Meter.

Table AB. DX8100 Resource Meter

Item	Part	Description
1	View Pane	Displays the available system resources (CPU and Memory resource levels) for the DX8100 server. The meter range is 0 to 100 percent. The CPU and Memory resource levels cannot exceed 100 percent. If either level exceeds 100 percent, the DX8100 System Resources Warning dialog box appears. For information about configuring analog and IP cameras for optimal system resources performance in order to bring the system resources within an acceptable range, refer to *Configuring Analog and IP Cameras for Optimal Hybrid Video Recording* on page 126. **NOTE:** The DX8100 Resource Meter shows the CPU and memory resource levels that are specific to the DX8100 server application. They do not match the resource levels that appear in Windows Task Manager on the server.
2	Memory Level (Blue)	Indicates the DX8100 server's memory usage.
3	CPU Level (Orange)	Indicates the DX8100 server's CPU usage.
4	Data Area	Displays the CPU and Memory usage as a percentage.
5	IP Camera Status Button	Sends a command to the IP address of the camera displayed in the Selected Channel drop down box. The ping command opens and displays the results in the IP Camera Network Status dialog box.
6	IP Camera Properties Button	Opens a dialog box that allows you to assign an IP camera to a camera channel.

If the CPU level or the Memory level exceeds 100 percent, the DX8100 System Resources Warning dialog box appears.

Click the check box to disable the DX8100 System Resources Warning dialog box.

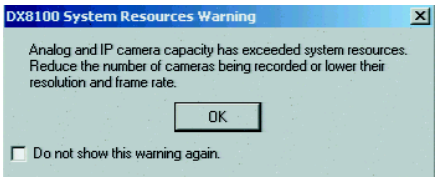
DX8100 System Resources Warning
Analog and IP camera capacity has exceeded system resources. Reduce the number of cameras being recorded or lower their resolution and frame rate.
OK
Do not show this warning again.

Figure 94. DX8100 System Resources Warning Dialog Box

You can easily add, remove, and configure analog and IP cameras to achieve optimal hybrid video recording and system resources performance.

NOTE: The system operates best when the CPU and Memory levels are less than 100 percent. For information about the DX8100 Resource Meter, refer to *Understanding the DX8100 Resource Meter* on page 125.

The DX8100 Resource Meter provides a real-time display of available system resources. Use the DX8100 Resource Meter to help you fine tune the analog and IP camera recording settings.

In summary, to configure the unit for optimal hybrid video recording, do any combination of the following:

- Adjust the analog camera recording settings (refer to *Basic Camera Setup* on page 112 and *Schedule Setup* on page 139)
- Adjust the IP camera recording settings (refer to *Configuring IP Camera Settings* on page 122 and *Customizing IP Camera Display Settings* on page 123)
- Disable an analog camera (refer to *Disabling an Analog Camera* on page 126
- Disable an IP camera (refer to *Disabling an IP Camera* on page 126 and *Deleting an IP Camera* on page 127)
- Restore a disabled analog or IP camera (refer to *Restoring a Disabled Analog or IP Camera* on page 127)

Disabling an Analog Camera

1. On the DX8100 toolbar, click the Setup button . The Setup dialog opens to the Camera page.
2. From the Selected Channel drop-down box, select an analog camera. The camera is highlighted in the Site Tree.
3. From the extended Selected Channel drop-down box, select Disable.
4. Click Apply. The selected analog camera is removed from the Site Tree. The camera's customized settings are retained.

A disabled analog camera can be reassigned to the Site Tree. For information about restoring a disabled analog camera, refer to *Restoring a Disabled Analog or IP Camera* on page 127.

Disabling an IP Camera

Disabling an IP camera does not delete its customized settings. For example, you can temporarily disable an IP camera to recover system resources. For information about other reasons to disable an IP camera, refer to *About Analog and IP Camera Channel Configurations* on page 119.

1. On the DX8100 toolbar, click the Setup button . The Setup dialog opens to the Camera page.
2. In the Camera Properties section, do the following:
   a. In the Site Tree, select an IP camera. The IP camera name is displayed in the Selected Channel drop-down box.
   b. Select Disable in Camera page Selected Channel drop-down box.

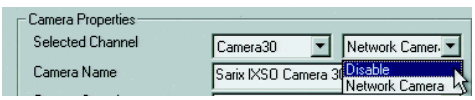

Figure 95. Disabling an IP Camera

3. Click Apply. The IP camera is removed from the Site Tree, but it is still assigned to the channel in the IP Camera Properties dialog box.

   The IP camera can be reassigned to the Site Tree. For information about restoring a disabled IP camera, refer to *Restoring a Disabled Analog or IP Camera* on page 127.

Deleting an IP Camera

1. On the DX8100 toolbar, click the Setup button . The Setup dialog opens to the Camera page.
2. Click IP Camera Properties. The IP Camera Properties dialog box appears.
3. In the IP Camera Properties dialog box, select the IP camera you want to delete.
4. Click Delete. The IP camera is deleted from the IP Camera Properties dialog box.
5. In the IP Camera Properties dialog box:
   - **To accept the deletion:** Click OK. The IP Camera Properties dialog box closes. The IP camera is removed from the Site Tree and its status changes to "Disable" in the extended Selected Channel drop-down box. The IP camera retains its customized camera name and display settings.

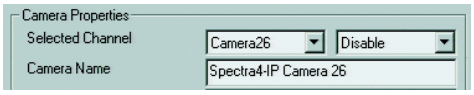

Figure 96. IP Camera Status: Disabled

If you select Network Camera in the extended Selected Channel drop-down box, a DX8100 message appears, stating that the IP camera is not registered. To register the IP camera, you must assign it to a camera channel. For information about assigning an IP camera to a camera channel, refer to *Assigning an IP Camera to a Camera Channel* on page 120.

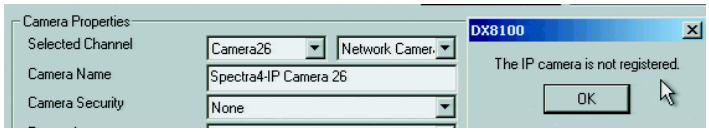

Figure 97. IP Camera Not Registered Dialog

   - **To cancel the deletion:**

     (1) Click Cancel. The IP Camera Properties dialog box closes. The IP camera is not removed from the Site Tree, but its status changes to "Disable" in the extended Selected Channel drop-down box.

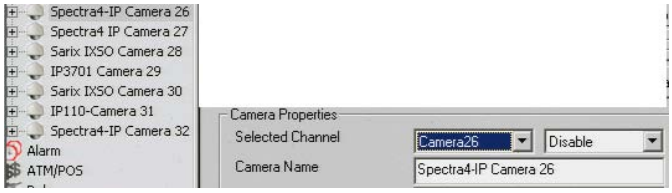

Figure 98. IP Camera in Site Tree and Status: Disabled

     (2) In the Camera page, click Cancel. The IP camera status changes to Network Camera in the extended Selected Channel drop-down box. The IP camera is not deleted from the IP Camera Properties dialog box.

Restoring a Disabled Analog or IP Camera

A disabled analog or IP camera can be restored. For information about configuring an IP camera, refer to *Assigning an IP Camera to a Camera Channel* on page 120.

NOTE: An IP camera that was deleted in the IP Camera Properties dialog box cannot be restored; a deleted IP camera must be reconfigured.

Analog Camera

1. From the Selected Channel drop-down box, select an analog camera. The camera name is displayed in the Camera Name box.
2. From the extended Selected Channel drop-down box, select Local Camera.
3. Click Apply. The camera name is displayed in the Site Tree and video is displayed in the Camera page preview window.

IP Camera

NOTE: An IP camera must be configured and assigned to a camera channel in the IP Camera Properties dialog box before it can be assigned as a network camera.

1. From the Selected Channel drop-down box, select an IP camera. The camera name is displayed in the Camera Name box.
2. From the extended Selected Channel drop-down box, select Network Camera. If an error message appears, reassign the IP camera to a camera channel (refer to *Customizing IP Camera Display Settings* on page 123).
3. Click Apply. The camera name is displayed in the Site Tree and video is displayed in the Camera page preview window.

LINK SETUP

This section describes how to use the Link page to set up the following:

- Relay and alarm settings
- Event-relay link settings
- Event-recording link settings
- Event-PTZ link settings

This section includes the following topics:

- *Configuring Basic Relay and Alarm Settings*
- *Linking Relay Outputs to External Events* on page 130
- *Linking PTZ Presets and Patterns to External Events* on page 135
- *Linking Cameras to Record in Response to External Events* on page 132

CONFIGURING BASIC RELAY AND ALARM SETTINGS

The DX8100 can support up to 32 alarm inputs and 24 relay outputs. Each 8-channel HVR has 8 dry contact alarm inputs and 8 relay terminals; each 16-channel HVR has 16 dry contact alarm inputs and 16 relay terminals.

This section describes how to configure basic relay and alarm settings, including the following topics:

- *Understanding How Relays and Alarms React to a Power Outage*
- *Configuring DX8100 Basic Relay and Alarm Settings*
- *Configuring Basic Relay Operating Properties*
- *Configuring Basic Alarm Input Operating Properties* on page 129

Understanding How Relays and Alarms React to a Power Outage

The DX8100 server might experience an external AC power outage that impacts how the relay and alarm features function.

- **Power outage:** Relays configured as NO are closed if the DX8100 is server is shut down by a power outage, or the AC cord is unplugged.
- **Power button:** Relays configured as NO are closed if the DX8100 power button is pressed and held down.

In the scenarios above, a relay will remain closed as long as the DX8100 is powered down. In this case, alarms or sirens connected to the relays might produce a false alert.

Configuring DX8100 Basic Relay and Alarm Settings

To access the Link page to program alarms and relays:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog opens to the Camera setup page.
2. Click the Linking button . The Link page is displayed.

Configuring Basic Relay Operating Properties

To configure basic relay operating properties:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog opens to the Camera page.
2. Click the Linking button to display the Link page.
3. In the Relay Settings section, do the following:
   a. In the Relay Channel drop-down box, select the relay you want to configure.
   b. In the Relay Name box, enter an optional new name for the relay. Relay names can be up to 32 characters long and can include spaces and special characters.

      You can also rename sites, cameras, alarms, and relays from the Site Tree by slowly clicking twice on each object's name.
   c. In the Relay Type section, click the NO/NC button to toggle the default output type for each relay (normally open or normally closed).
4. Click Apply.

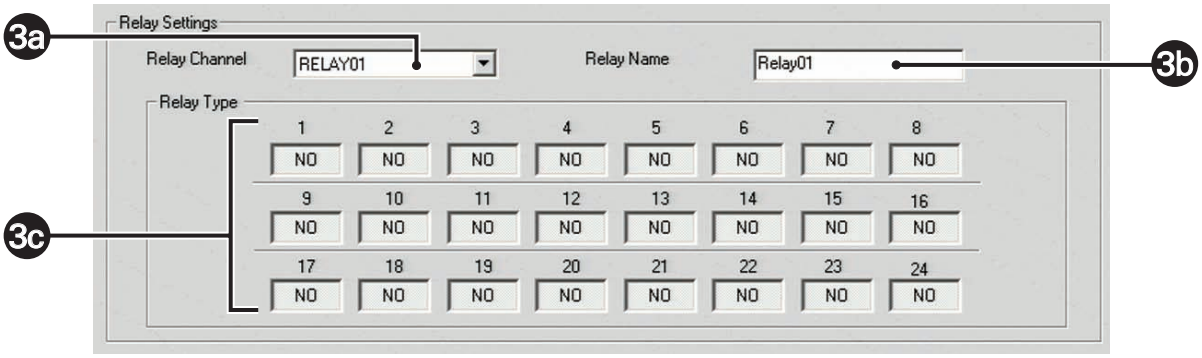
3a
3b
3c
Relay Settings
Relay Channel
RELAY01
Relay Name
Relay01
Relay Type
1 2 3 4 5 6 7 8
NO NO NO NO NO NO NO NO
9 10 11 12 13 14 15 16
NO NO NO NO NO NO NO NO
17 18 19 20 21 22 23 24
NO NO NO NO NO NO NO NO

Figure 99. Relay and Alarm Settings Page: Relay Settings Section

Configuring Basic Alarm Input Operating Properties

Most applications will not require you to change relay and alarm settings from their default states.

To configure basic alarm input operating properties:

1. On the DX8100 toolbar, the Setup button . The Setup dialog opens to the Camera page.
2. Click the Linking button to display the Link page.
3. In the Alarm Settings section, do the following:
   a. In the Alarm Channel drop-down box, select the Alarm you want to configure.
   b. In the Alarm Name box, enter an optional new name for alarm. Alarm names can be up to 32 characters long and can include spaces and special characters.

      You can also rename sites, cameras, alarms, and relays from the Site Tree by slowly clicking twice on each object's name.
   c. In the Alarm Type section, click the NO/NC button to toggle the default output type for each alarm (normally open or normally closed).

4. Click Apply.

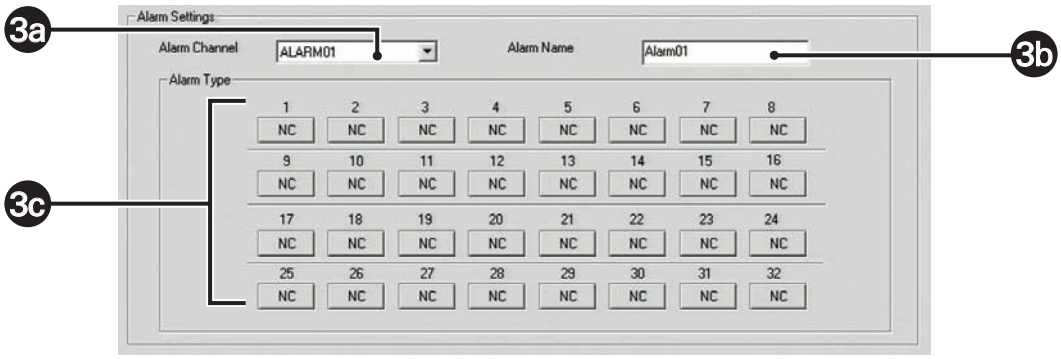

Figure 100. Relay and Alarm Settings Page: Alarm Settings Section

LINKING RELAY OUTPUTS TO EXTERNAL EVENTS

This section describes how to link relay outputs to external events, such as motion, alarm, ATM/POS, and video loss events. The following topics are included:

- *Linking Relay Outputs to Motion Events*
- *Linking Relay Outputs to Alarm Events* on page 131
- *Linking Relay Outputs to ATM/POS Events* on page 131
- *Linking Relay Outputs to Video Loss Events* on page 132

To access the Event-Relay Link Settings page:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Linking button . The Linking page opens to the Relay and Alarm Settings page.
3. Click the Event-Relay Link Settings tab.

Linking Relay Outputs to Motion Events

To set relay outputs to activate in response to motion detection events:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Linking button .
3. Click the Event-Relay Link Settings tab.
4. In the Motion Detection Link Settings section, do the following:
   a. Select a camera channel from the Camera Channel drop-down box.
   b. Click the button for each relay you want to link to the selected camera.

      You can also drag relays onto cameras in the Site Tree while in Live mode (main screen).
5. Click Apply.

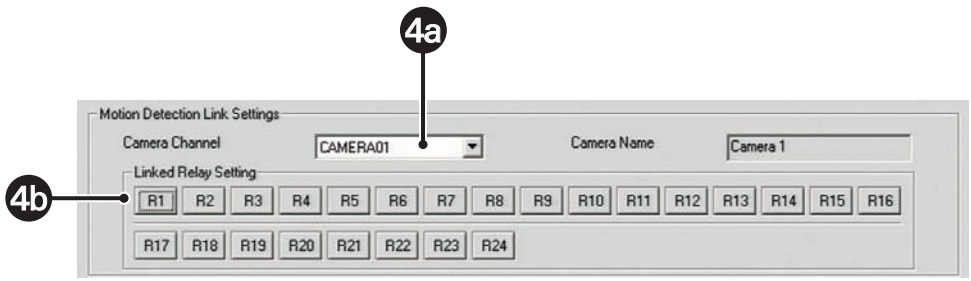
4a
4b
Motion Detection Link Settings
Camera Channel
CAMERA01
Camera Name
Camera 1
Linked Relay Setting
R1 R2 R3 R4 R5 R6 R7 R8 R9 R10 R11 R12 R13 R14 R15 R16
R17 R18 R19 R20 R21 R22 R23 R24

Figure 101. Event-Relay Link Settings: Motion Detection Link Settings Section

Linking Relay Outputs to Alarm Events

To set relay outputs to activate in response to an alarm event:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Linking button .
3. Click the Event-Relay Link Settings tab.
4. In the Alarm Link Settings section, do the following:
   a. Select an alarm channel from the Alarm Channel drop-down box.
   b. Click the button for each relay you want to link to the selected alarm.
      You can also drag relays onto alarms in the Site Tree while in Live mode (main screen).
5. Click Apply.

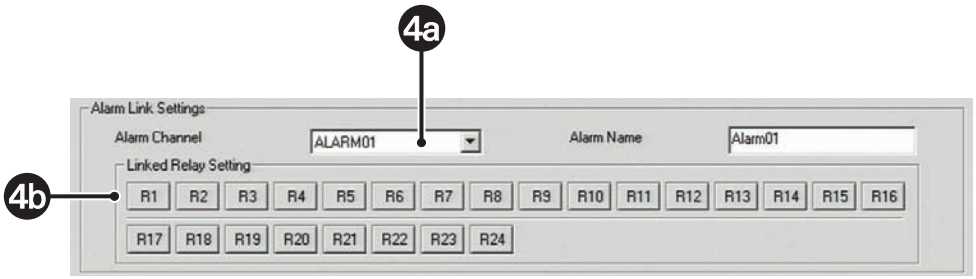

Figure 102. Event-Relay Link Settings: Alarm Link Settings Section

Linking Relay Outputs to ATM/POS Events

To set relay outputs to activate in response to an ATM/POS event:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Linking button .
3. Click the Event-Relay Link Settings tab.
4. In the ATM/POS Link Settings section, do the following:
   a. Select an ATM/POS address from the ATM/POS Address drop-down box.
   b. Click the button for each relay you want to link to the selected ATM/POS address.
      You can also drag relays onto ATM/POS devices in the Site Tree while in Live mode (main screen).
5. Click Apply.

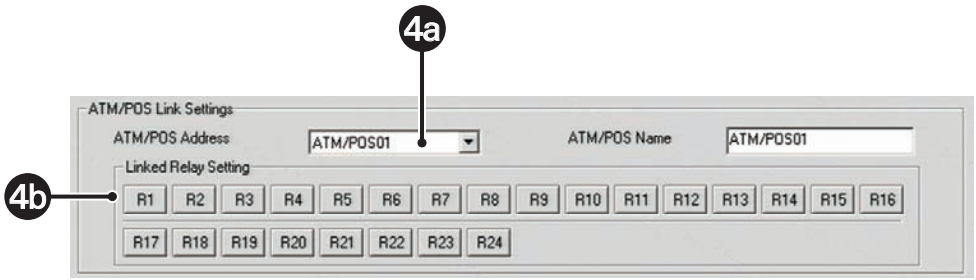

Figure 103. Event-Relay Link Settings: ATM/POS Link Settings Section

Linking Relay Outputs to Video Loss Events

To set relay outputs to activate in response to a video loss event:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Linking button .
3. Click the Event-Relay Link Settings tab.
4. In the Video-Loss Link Settings section, do the following:
   a. Select a camera from the Video-Loss Channel drop-down box.
   b. Click the button for each relay you want to link to the selected Video-Loss Channel.
5. Click Apply.

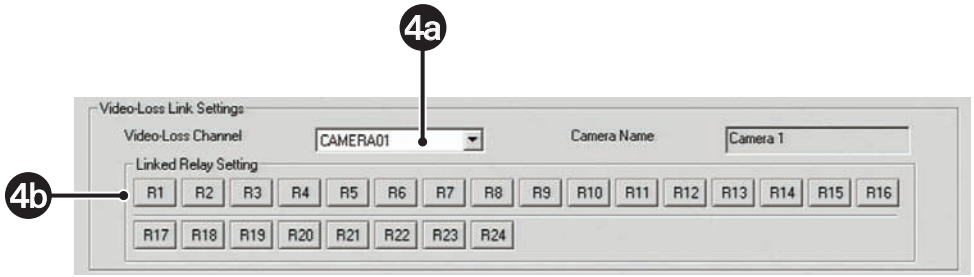

Figure 104. Event-Relay Link Settings: Video-Loss Link Settings Section

LINKING CAMERAS TO RECORD IN RESPONSE TO EXTERNAL EVENTS

Multiple cameras can be configured to begin recording in response to detected motion, alarm, ATM/POS transaction, and video loss events. This section describes how to link cameras to record in response to these events and includes the following topics:

- *Linking Cameras to Record in Response to Motion Events* on page 132
- *Linking Cameras to Record in Response to Alarm Events* on page 133
- *Linking Cameras to Record in Response to ATM/POS Events* on page 133
- *Linking Cameras to Record in Response to Video Loss Events* on page 134

Linking Cameras to Record in Response to Motion Events

To link multiple cameras to record in response to motion detection events:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Linking button . The Linking page is displayed.
3. Click the Event-Recording Link Settings tab.
4. In the Motion Record Link Settings section, do the following:
   a. Select a camera from the Motion Source Camera drop-down box.
   b. Click the button for each camera you want to begin recording when motion is detected by the source camera.

5. Click Apply.

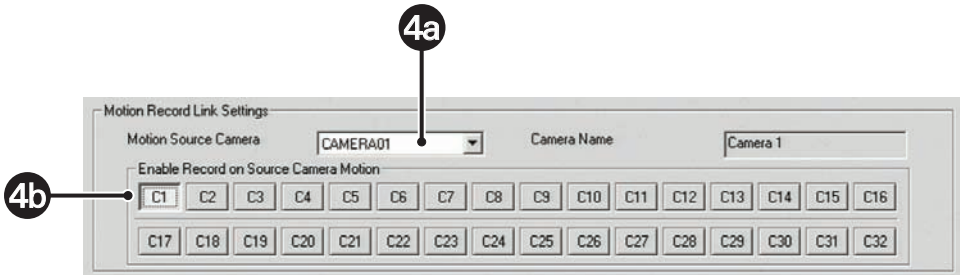
4a
4b
Motion Record Link Settings
Motion Source Camera
CAMERA01
Camera Name
Camera 1
Enable Record on Source Camera Motion
C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16
C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C32

Figure 105. Event-Relay Link Settings: Video-Loss Link Settings Section

Linking Cameras to Record in Response to Alarm Events

To link multiple cameras to record in response to a single alarm input:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Linking . The Linking page is displayed.
3. Click the Event-Recording Link Settings tab.
4. In the Alarm Record Link Settings section, do the following:
   a. Select an Alarm channel from the Alarm Channel drop-down box.
   b. Click the button for each camera you want to begin recording when the source alarm is triggered.
5. Click Apply.

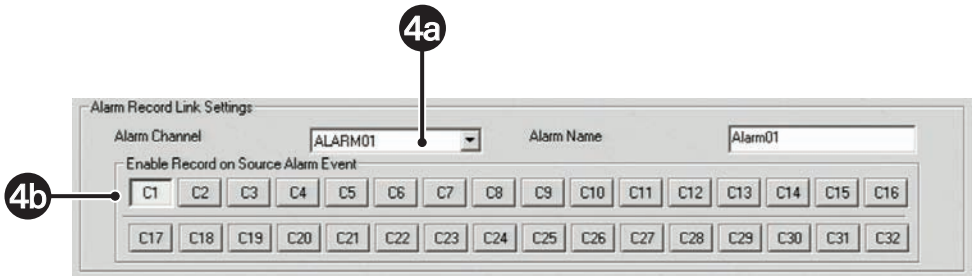
4a
4b
Alarm Record Link Settings
Alarm Channel
ALARM01
Alarm Name
Alarm01
Enable Record on Source Alarm Event
C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16
C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C32

Figure 106. Event-Recording Link Settings: Alarm Record Link Settings Section

Linking Cameras to Record in Response to ATM/POS Events

To link multiple cameras to record in response to an ATM/POS event:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Linking button . The Linking page is displayed.
3. Click the Event-Recording Link Settings tab.
4. In the ATM/POS Record Link Settings section, do the following:
   a. Select an ATM/POS address from the ATM/POS address drop-down box.
   b. Click the button for each camera you want to begin recording in response to an ATM/POS event.

5. Click Apply.

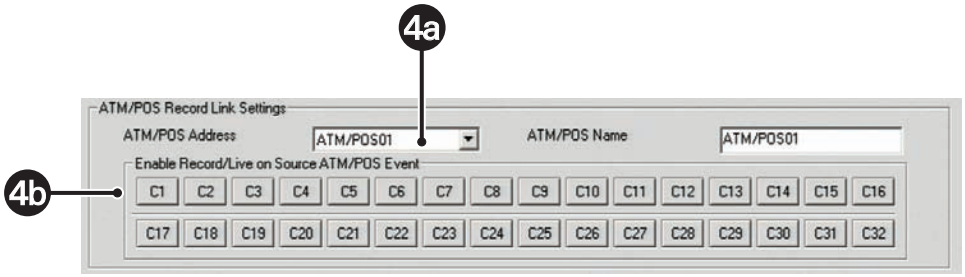
4a
4b
ATM/POS Record Link Settings
ATM/POS Address
ATM/POS01
ATM/POS Name
ATM/POS01
Enable Record/Live on Source ATM/POS Event
C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16
C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C32

Figure 107. Event-Recording Link Settings: ATM/POS Record Link Settings Section

Linking Cameras to Record in Response to Video Loss Events

To link multiple cameras to record in response to a video loss event:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Linking button . The Linking page is displayed.
3. Click the Event-Recording Link Settings tab.
4. In the Video-Loss Record Link Settings section, do the following:
   a. Select a camera from the Video-Loss Channel drop-down box.
   b. Click the button for each camera you want to begin recording in response to a video loss event.
5. Click Apply.

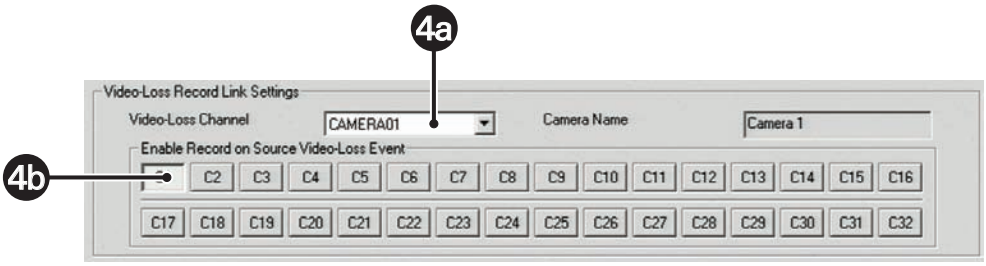
4a
4b
Video-Loss Record Link Settings
Video-Loss Channel
CAMERA01
Camera Name
Camera 1
Enable Record on Source Video-Loss Event
C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16
C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C32

Figure 108. Event-Recording Link Settings: Video-Loss Record Link Settings Section

LINKING PTZ PRESETS AND PATTERNS TO EXTERNAL EVENTS

The DX8100 can be configured in such a way that motion, alarms, ATM/POS transactions, and video loss events detected by one camera will result in the repositioning of another. Similarly, alarm inputs can be set to trigger camera-positioning presets. Only a single preset or pattern can be linked to a camera.

This section describes how to link PTZ presets and patterns to motion and alarm events, including the following topics:

- *Linking PTZ Presets and Patterns to Motion Events* on page 135
- *Linking PTZ Presets and Patterns to Alarm Events* on page 136
- *Linking Presets and Patterns to ATM/POS Events* on page 137
- *Linking Presets and Patterns to Video Loss Events* on page 138

Linking PTZ Presets and Patterns to Motion Events

To link two cameras so that motion detected on one results in the repositioning of another:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Linking button . The Linking page is displayed.
3. Click the Event-PTZ Link Settings tab.
4. In the Motion Detection Link Settings section, do the following:
   a. Select a camera from the Camera Channel drop-down box. (This camera will be the motion source.)
   b. In the Linked PTZ Setting section, select a camera to be linked from the Linked Camera Channel drop-down box. (This camera will change PTZ position in response to motion detected by the source camera.)
5. To select a PTZ preset or pattern for the linked camera, in the Linked PTZ Setting section, do one of the following:
   - To force the linked camera to move to a PTZ preset in response to motion detected by the source camera:
     (1) Click the Linked Camera Preset button to select this option.
     (2) In the Preset drop-down box, select a PTZ preset (1-150).
   - To force a PTZ pattern to be activated in response to motion detected by the source camera:
     (1) Click the Linked Camera Pattern button to select this option.
     (2) In the Pattern drop-down box, select a PTZ pattern (1-4) to be activated on the camera.

     The selected camera must support PTZ functions, and at least one PTZ preset/pattern must be defined for this function to work.
6. Click Apply.

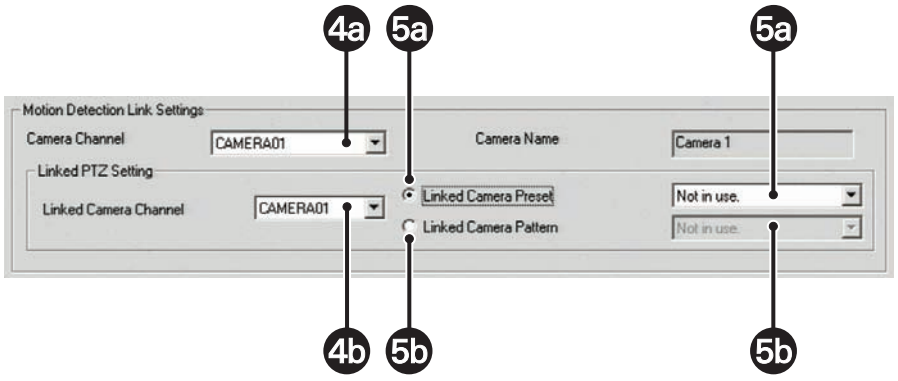

Figure 109. Event-PTZ Link Settings: Linking Presets and Patterns to Motion Events

Linking PTZ Presets and Patterns to Alarm Events

To link an alarm input to a camera so activation of the alarm results in a repositioning of that camera:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Linking button . The Linking page is displayed.
3. Click the Event-PTZ Link Settings tab.
4. In the Alarm Record Link Settings section, do the following:
   a. Select an alarm from the Alarm Channel drop-down box.
   b. In the Linked PTZ Setting section, select a camera to be linked from the Linked Camera Channel drop-down box. (This camera will change PTZ position in response to an alarm input detected by the source alarm.)
5. To select a PTZ preset or pattern for the linked camera, in the Linked PTZ Setting section, do one of the following:
   - To force the linked camera to move to a PTZ preset in response to an alarm input detected by the source camera:
     (1) Click the Linked Camera Preset button to select this option.
     (2) In the Preset drop-down box, select a PTZ preset (1-150).
   - To force a PTZ pattern to be activated in response to alarm input detected by the source camera:
     (1) Click the Linked Camera Pattern button to select this option.
     (2) In the Pattern drop-down box, select a PTZ pattern (1-4) to be activated on the camera.

     The selected camera must support PTZ functions, and at least one PTZ preset/pattern must be defined for this function to work.
6. Click Apply.

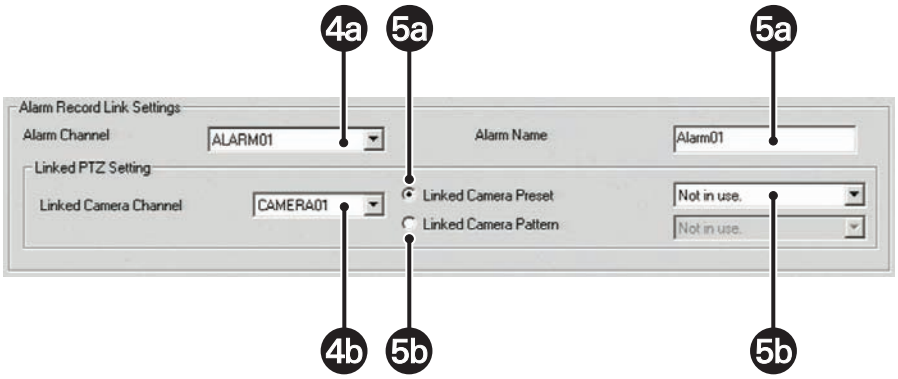

Figure 110. Event-PTZ Link Settings: Linking Presets and Patterns to Alarm Events

Linking Presets and Patterns to ATM/POS Events

To link an ATM/POS input to a camera so the detected ATM/POS event results in a repositioning of that camera:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Linking button . The Linking page is displayed.
3. Click the Event-PTZ Link Settings tab.
4. In the ATM/POS Link Settings section, do the following:
   a. Select an ATM/POS address from the ATM/POS Address drop-down box.
   b. In the Linked PTZ Setting section, select a camera to be linked from the Linked Camera Channel drop-down box. (This camera will change PTZ position in response to an ATM/POS input detected by the source ATM/POS device.)
5. To select a PTZ preset or pattern for the linked camera, in the Linked PTZ Setting section, do one of the following:
   - To force the linked camera to move to a PTZ preset in response to an ATM/POS input detected by the source camera:
     (1) Click the Linked Camera Preset button to select this option.
     (2) In the Preset drop-down box, select a PTZ preset (1-150).
   - To force a PTZ pattern to be activated in response to ATM/POS input detected by the source camera:
     (1) Click the Linked Camera Pattern button to select this option.
     (2) In the Pattern drop-down box, select a PTZ pattern (1-4) to be activated on the camera.

     The selected camera must support PTZ functions, and at least one PTZ preset/pattern must be defined for this function to work.
6. Click Apply.

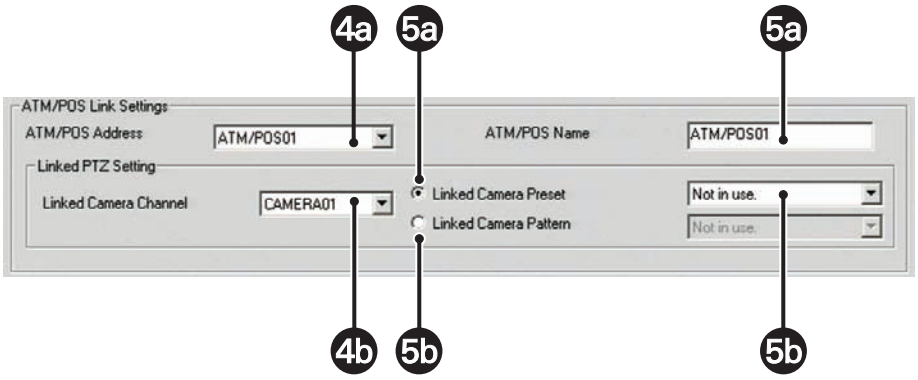

Figure 111. Event-PTZ Link Settings: Linking Presets and Patterns to ATM/POS Events

Linking Presets and Patterns to Video Loss Events

To link a video loss event to a camera so the detected video loss event results in a repositioning of that camera:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Linking button . The Linking page is displayed.
3. Click the Event-PTZ Link Settings tab.
4. In the Video-Loss Link Settings section, do the following:
   a. Select a camera channel from the Video-Loss Channel drop-down box.
   b. In the Linked PTZ Setting section, select a camera to be linked from the Linked Camera Channel drop-down box. (This camera will change PTZ position in response to a video loss event detected by the source camera.
5. To select a PTZ preset or pattern for the linked camera, in the Linked PTZ Setting section, do the one of the following:
   - To force the linked camera to move to a PTZ preset in response to a video loss event detected by the source camera:
     (1) Click the Linked Camera Preset button to select this option.
     (2) In the Preset drop-down box, select a PTZ preset (1-150) for the camera to move to.
   - To force a PTZ pattern to be activated in response to video loss input detected by the source camera:
     (1) Click the Linked Camera Pattern button to select this option.
     (2) In the Pattern drop-down box, select a PTZ pattern (1-4) to be activated on the camera.

     The selected camera must support PTZ functions, and at least one PTZ preset/pattern must be defined for this function to work.
6. Click Apply.

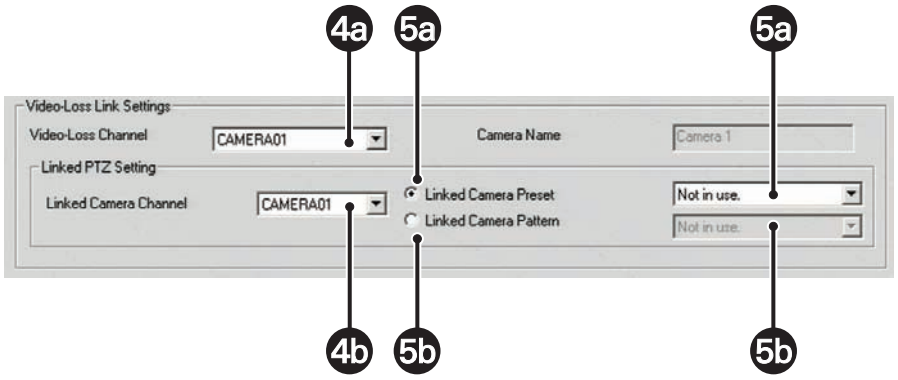

Figure 112. Event-PTZ Link Settings: Linking Presets and Patterns to Video Loss Events

SCHEDULE SETUP

The DX8100 provides extensive scheduling capabilities. Flexible recording schedules can be established for daily, weekday, weekend, or individual day recording. Recording time can be broken up into increments of one-half hour, and each increment can be scheduled to record continuously or in response to an alarm, motion, or ATM/POS event. Users with Power User access and higher can create recording schedules.

This section describes how to setup recording schedules and includes the following topics:

- *Accessing the Schedule* on page 139
- *Setting Up the Camera Recording Mode* on page 141
- *Creating Yearly Recording Schedules* on page 143
- *Creating Monthly or Multiple-Day Recording Schedules* on page 145
- *Creating Single-Day Schedules* on page 146
- *Editing Schedules* on page 148
- *Working with Custom Camera Settings* on page 150
- *Configuring the Frame Rate* on page 152
- *Setting Up Advanced Relay Output* on page 159

ACCESSING THE SCHEDULE

To access the scheduling features of the DX8100:

1. From the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Schedule button . The Schedule page is displayed.

Figure 113 shows the parts of the Schedule page.

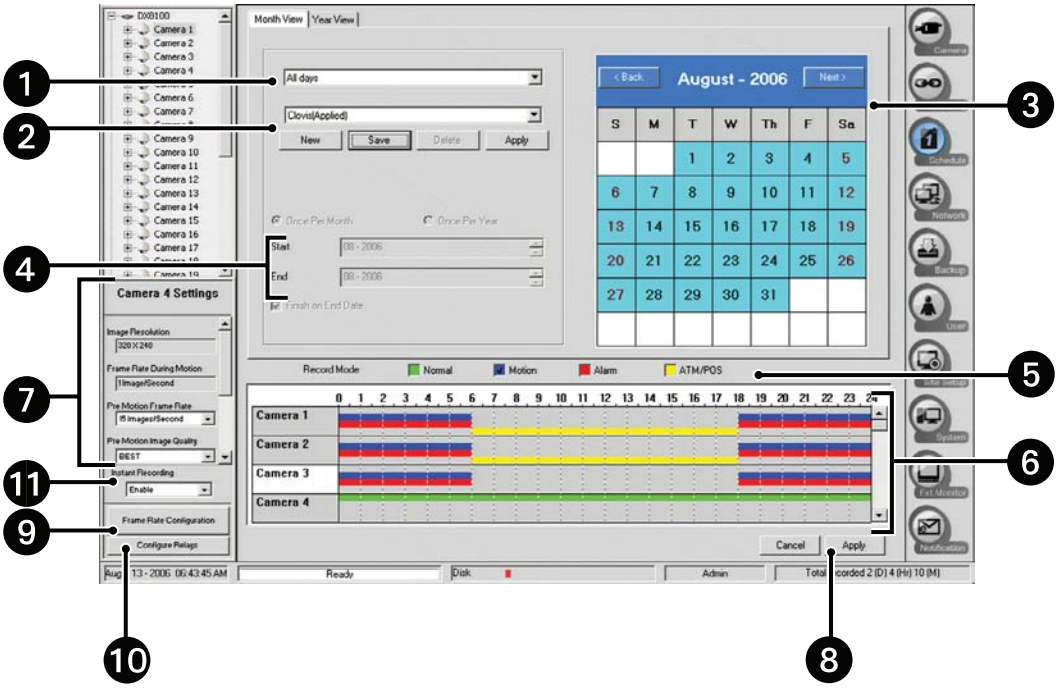

Figure 113. Schedule Page

Table AC describes the parts of the Schedule page.

Table AC. Parts of the Schedule Page

Item	Part	Description
❶	Schedule Type Drop-down Box	Selects the type of schedule. Options are as follows: • All days; Seven days a week • Weekdays; Monday through Friday, with the exception of any day assigned in Custom mode • Weekends; Saturday and Sunday, with the exception of any day assigned in Custom mode • Custom Mode; Any day, such as a holiday
❷	Recording Schedule Profile	Allows you to do the following: • Select and apply an existing schedule profile. • Create and save a new profile. • Change an existing profile. • Delete an existing profile.
❸	Calendar	Displays current schedule profile in accordance with the schedule type selected (All Days, Weekdays, Weekends, or Custom Mode).
❹	Start and End Date Markers	Sets the start and end dates for a custom schedule.
❺	Record Mode	Selects a recording mode to be applied to a camera. Options are as follows: • Normal • Motion • Alarm • ATM/POS
❻	Channel Scheduling Panel	Allows the assignment of recording modes across individual camera channels over a 24-hour period.
❼	Camera Settings Panel	Allows custom settings to be applied to individual cameras for each recording mode.
❽	Apply	Saves current schedule.
❾	Frame Rate Configuration	Allows configuration of channel resolution and frame rates.
❿	Configure Relays	Allows configuration of relays that have been linked to cameras and alarms.
⓫	Instant Recording	Enables or disables selection of instant recording from the View menu.

SETTING UP THE CAMERA RECORDING MODE

The DX8100 allows you to schedule each camera to record in a single or multiple-event mode across a 24-hour timeline. Users with Power User access or higher can schedule video recording for one or more cameras. Use the Record Mode section near the bottom of the Schedule page to configure the recording mode for each camera.

This section describes how to schedule a recording mode and includes the following topics:

- *Scheduling a Record Mode*
- *Clearing a Scheduled Recording* on page 142

Scheduling a Record Mode

The DX8100 allows you to schedule a camera for multiple event recording. In this case, pre-event (motion, alarm, or ATM/POS) recording is set at the frame rate of the active record mode when the alarm, motion, or ATM/POS event occurred. For example, if the DX8100 HVR is recording at 1 ips in the Normal record mode when an alarm event occurs, video is recorded at 1 ips during the pre-event time period. After the pre-event time period expires, the recording rate switches to the frame rate configured for the event.

To schedule a record mode for one or more channels:

1. From the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Schedule button . The Schedule page is displayed.
3. Click the check box for the record mode you want to apply to a channel.
   - Normal
   - Motion
   - Alarm
   - ATM/POS

Table AD describes the record modes.

Table AD. Record Modes

Mode	Color	Description
Normal	Green	Continuous recording.
Motion	Blue	Recording is triggered during the selected time block if a motion event is detected in the camera's predefined motion field. For information about motion detection, refer to *Motion Detection Setup* on page 114.
Alarm	Red	Recording is triggered during the selected time block when an alarm is activated. At least one alarm must be linked to the camera for this option to work. For information about alarms, refer to *Linking Alarm Inputs to a Camera* on page 43.
ATM/POS	Yellow	Recording is triggered during the selected time block if an ATM or POS event is detected in the camera's predefined ATM/POS field. For information about ATM/POS detection, refer to *Linking Cameras to Record in Response to ATM/POS Events* on page 133.

4. Click and drag the mouse to highlight the time periods and channels where you want the recording mode to apply.

   Drag the mouse diagonally to highlight periods across multiple camera channels simultaneously.

5. Click Apply.

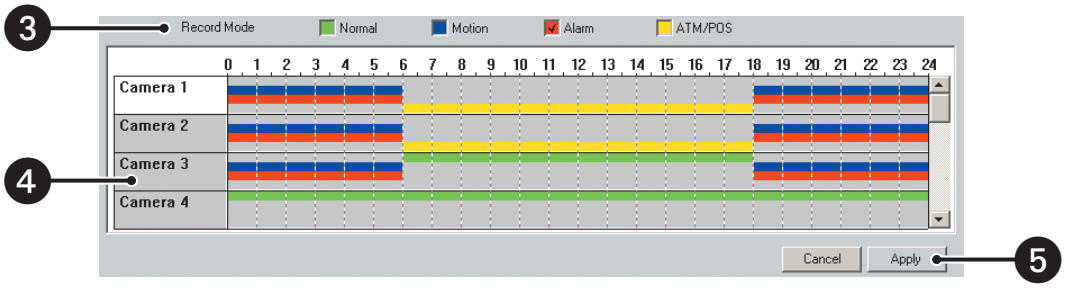

Figure 114. Filling In Recording Blocks in a Schedule Grid

Clearing a Scheduled Recording

The DX8100 Schedule feature allows you to do the following:

- For one or multiple channels, clear the scheduled recording times for a specific record mode. You can select one channel or you can drag and select a group of channels. For example, you can select and drag the recording times for channel 1-32. However, the system does not allow you to select random channels from the list. For example, you are not allowed to select channel 1, 2, and 4 (excluding camera 3).
- For one or multiple channels, you can clear the scheduled recording times for all record modes simultaneously.
- You can select and clear recording times periods in increments of 30 minutes to 24 hours.

This section describes how to clear a scheduled recording and includes the following sections:

- *Clearing Recording Times for a Specific Record Mode* on page 142
- *Clearing Recording Times for All Record Modes* on page 143

Clearing Recording Times for a Specific Record Mode

To clear the scheduled recording times for a specific record mode for one or more channels:

1. From the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Schedule button . The Schedule page is displayed.
3. Click a record mode check box to select the specific record mode.
4. Right-click and drag to highlight the time periods and channels for which you want to *clear* recording times.
5. Release the right mouse button. The highlighted recording times are cleared.
6. Do one of the following:
   - To accept the change, click Apply. The selected time period is deleted.
   - To cancel the change, click Cancel. The deleted recording times are restored.

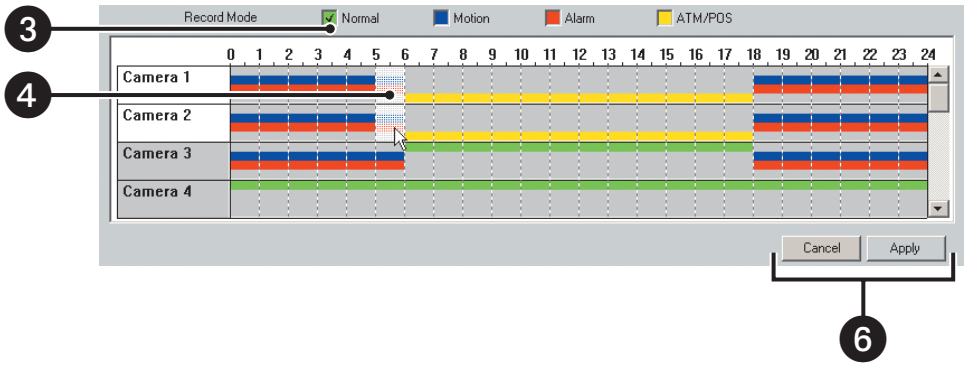

Figure 115. Clearing Recording Times for a Specific Record Mode

Clearing Recording Times for All Record Modes

To clear the scheduled recording times for all record modes:

1. From the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Schedule button . The Schedule page is displayed.
3. Click a record mode check box to deselect the record mode. No record mode is selected.
4. Right-click and drag to highlight the time periods and channels for which you want to *clear* recording times.
5. Release the right mouse button. The highlighted recording times are cleared.
6. Do one of the following:
   - To accept the change, click Apply. The selected time period is deleted.
   - To cancel the change, click Cancel. The deleted recording times are restored.

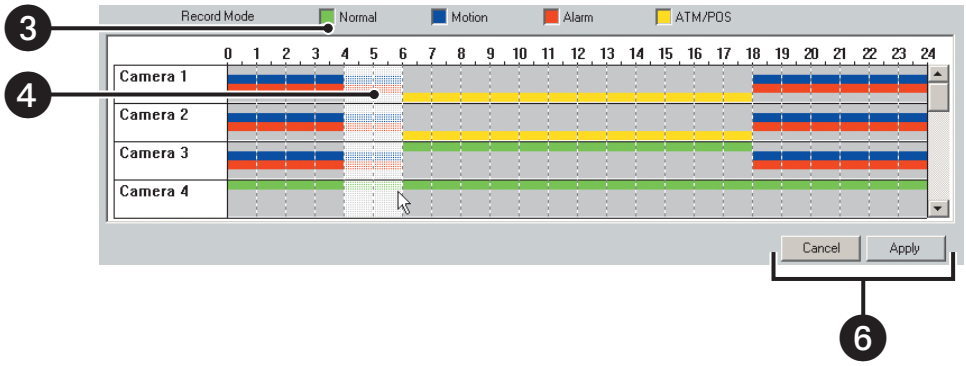

Figure 116. Clearing Recording Times for All Record Modes

CREATING YEARLY RECORDING SCHEDULES

The DX8100 allows you create and save various recording schedules. This section describes how to create yearly recording schedules and includes the following sections:

- *Creating a Yearly Recording Schedule*
- *Scheduling Individual Days Using the Year View* on page 144
- *Copying Schedule Attributes to a Different Day* on page 144

Creating a Yearly Recording Schedule

Year View allows a user to customize recording schedules for individual days. Year View displays daily recording schedules in a calendar format. The calendar displays one year's worth of daily recording schedules. The scheduling period begins in the current month.

- Days circled in red have been assigned weekday, weekend, or everyday recording schedules.
- Days circled in blue have been assigned a custom recording schedule.
- Days without circles denote that no recording has been scheduled for that day.

Scheduling Individual Days Using the Year View

To schedule individual days using the Year View:

1. From the DX8100 toolbar, click the Setup button. The Setup dialog box opens to the Camera page.
2. Click the Schedule button. The Schedule page is displayed.
3. Click the Year View tab. The Year View page is displayed.
4. Click the day you want to schedule.
5. Using your mouse, select the recording modes and times for each channel you want to schedule. For information about selecting a recording mode, refer to *Setting Up the Camera Recording Mode* on page 141.
6. Repeat steps 2 and 3 for each additional day you want to schedule.
7. Click Apply.

Copying Schedule Attributes to a Different Day

To copy the schedule attributes of one day and apply them to a different day:

1. From the DX8100 toolbar, click the Setup button. The Setup dialog box opens to the Camera page.
2. Click the Schedule button. The Schedule page is displayed.
3. Right-click the calendar day you want to copy.
4. Select Copy from the shortcut menu.

Figure 117. Year View Calendar Shortcut Menu

5. Right-click the day on the calendar you want to apply the copied schedule attributes.
6. Select Paste from the shortcut menu.
7. Click Apply.

   To change a custom schedule day to a regular schedule day, right-click and select “Revert to daily schedule” from the shortcut menu.

CREATING MONTHLY OR MULTIPLE-DAY RECORDING SCHEDULES

Unlike schedules set in the Year View, Month View schedules are recurrent. Schedules can be set for subsequent weekdays, weekends, everyday, or a single day.

This section describes how to create a monthly or multiple-day schedule and includes the following topics:

- *Creating Multiple-Day Schedules*
- *Creating Single-Day Schedules* on page 146

Creating Multiple-Day Schedules

To create a recording schedule to recur indefinitely:

1. From the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Schedule button . The Schedule page is displayed.
3. Click the Month View tab if it is not currently selected.
4. Select All days, Weekday, or Weekends from the drop-down box.
5. Click New. The New File Name dialog box opens.
6. In the New File Name box, enter a new filename for the profile.

   The profile file name follows the standard Windows file-naming conventions.
7. Click OK.
8. Using your mouse, select the recording modes and times for each camera you want to schedule. For information about camera scheduling, refer to *Setting Up the Camera Recording Mode* on page 141.
9. Click Save.
10. Click Apply.
11. Click the Apply button at the bottom of the Schedule page.

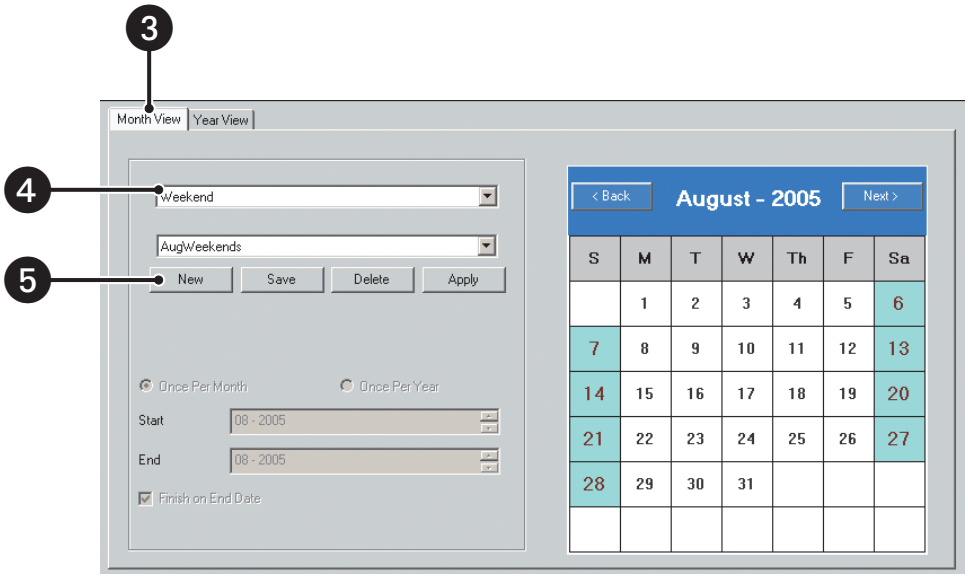

Figure 118. Month View Page: Multi-Day Schedule

Creating Single-Day Schedules

This section describes how to create a single-day schedule and includes the following topics:

- *Working with Single-Day Schedules*
- *Copying and Applying Schedule Attributes* on page 148

Working with Single-Day Schedules

Custom Mode schedules are defined for single days only. A custom-scheduled day can be set to recur on the same day of every month or the same day every year.

To set the HVR to record on a specific day:

1. From the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Schedule button . The Schedule page is displayed.
3. Click the Month View tab (if it is not currently selected.)
4. Select Custom Mode from the drop-down box.
5. Click New. The New File Name dialog box opens.
6. Enter a new file name for the profile.

   The profile file name follows the standard Windows file-naming conventions.
7. Click OK.
8. Select Once Per Month or Once Per Year.
9. Select the date range for the custom schedule.
   a. Set the start date with the Start spinner buttons.

      The start date cannot be set later than the end date.
   b. If you want the schedule to recur indefinitely, deselect the Finish on End Date check box.
   c. Set the end date with the End spinner buttons.
10. On the calendar, click the desired date.
11. Select the recording modes and times for each camera you want to schedule. Refer to *Setting Up the Camera Recording Mode* on page 141 for instructions.
12. Click Save.
13. Click Apply.

14. Click the Apply button at the bottom of the screen.

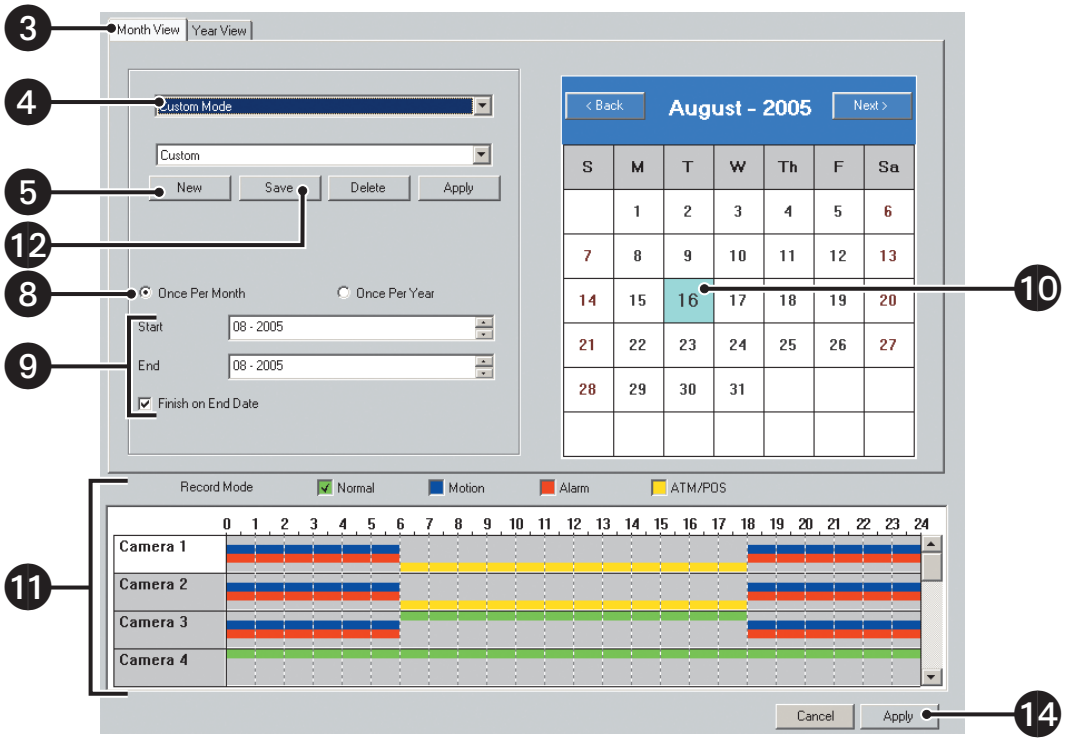

Figure 119. Month View Page: Single-Day Schedule

Copying and Applying Schedule Attributes

To copy the schedule attributes of one day and apply them to a different day:

1. From the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Schedule button . The Schedule page is displayed.
3. Right-click the calendar day you want to copy.
4. Select Copy from the shortcut menu.

Figure 120. Month View Calendar Shortcut Menu

5. Right-click on the calendar day to which you want to apply the copied schedule attributes.
6. Select Paste from the shortcut menu.
7. Click the Apply button at the bottom of the screen.

   To change a custom schedule day to a regular schedule day, right-click and select "Revert to daily schedule" from the shortcut menu.

EDITING SCHEDULES

This section describes how to edit a schedule to change its profile or delete a schedule. The following topics are included:

- *Changing an Existing Schedule Profile*
- *Deleting an Existing Schedule Profile* on page 149

Changing an Existing Schedule Profile

To change a profile:

1. From the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Schedule button . The Schedule page is displayed.
3. Click the Month View tab if it is not currently selected.
4. In the drop-down box, select the type of schedule you want to change. Options are as follows:
   - All Days
   - Weekdays
   - Weekends
   - Custom Mode
5. Select the schedule profile from the drop-down box.
6. Using your mouse, assign new recording modes and times for each camera you want to schedule. Refer to *Setting Up the Camera Recording Mode* on page 141 for instructions.
7. Click Save.

8. Click Apply.
9. Click the Apply button at the bottom of the screen.

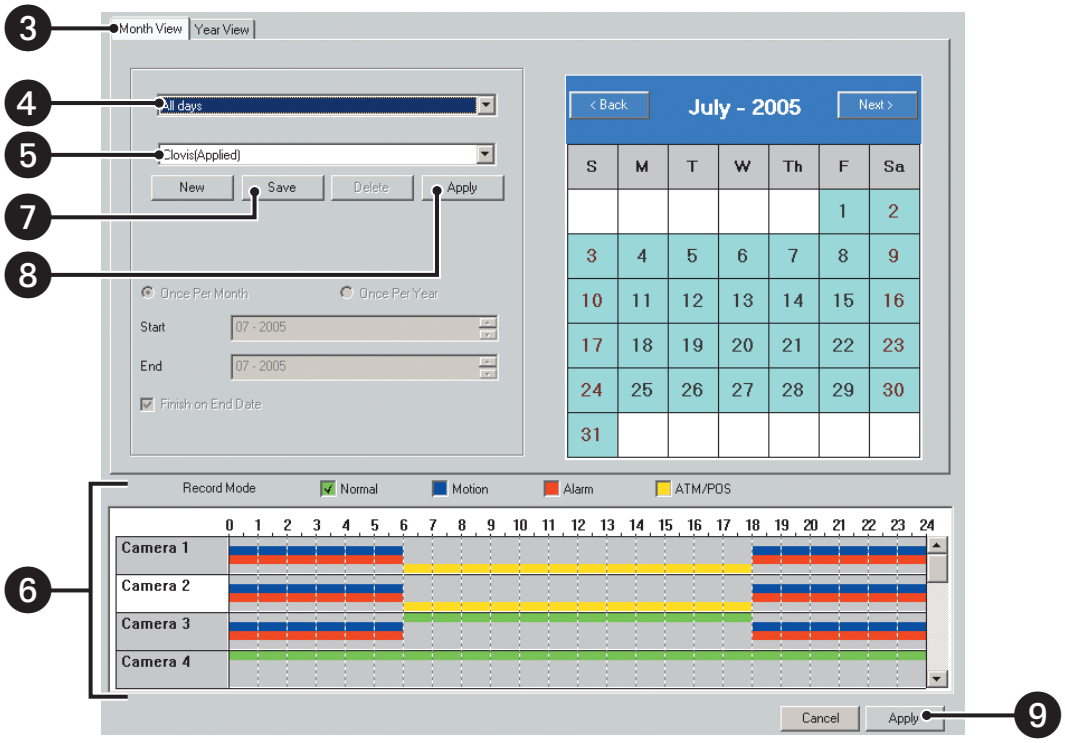

Figure 121. Month View Page

Deleting an Existing Schedule Profile

To delete a schedule profile:

1. From the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Schedule button . The Schedule page is displayed.
3. Click the Month View tab if it is not currently selected.
4. In the drop-down box, select the type of schedule you want to change. Options are as follows:
   - All days
   - Weekdays
   - Weekends
   - Custom Mode
5. In the drop-down box, select a profile that is *different* from the one you want to delete. (This step is necessary because you cannot delete a schedule profile that is currently active.)
6. Click Apply.
7. In the drop-down box, select the profile you want to delete.
8. Click Delete.

9. Click Apply.

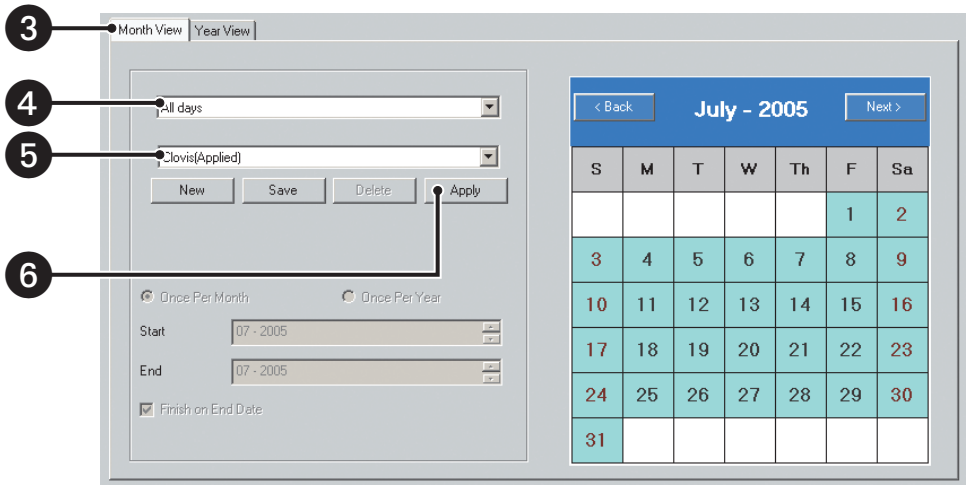

Figure 122. Month View Page

WORKING WITH CUSTOM CAMERA SETTINGS

This section describes how to configure customized camera settings and includes the following topics:

- *Configuring Custom Camera Settings*
- *Examples of Custom Camera Settings* on page 151

Configuring Custom Camera Settings

Each camera can be configured with custom recording settings.

To customize camera settings for normal, motion, alarm, or ATM/POS recording:

1. From the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Schedule button . The Schedule page is displayed.
3. Click the plus (+) sign next to a camera in the Site Tree.
4. Select a recording mode from one of the following options:
   - Normal
   - Motion
   - Alarm
   - ATM/POS
5. In the Camera Settings section, click Frame Rate Configuration. The Frame Rate Configuration dialog box opens.
6. Adjust the parameters in the camera settings section.
7. Click OK.

8. Click Apply.

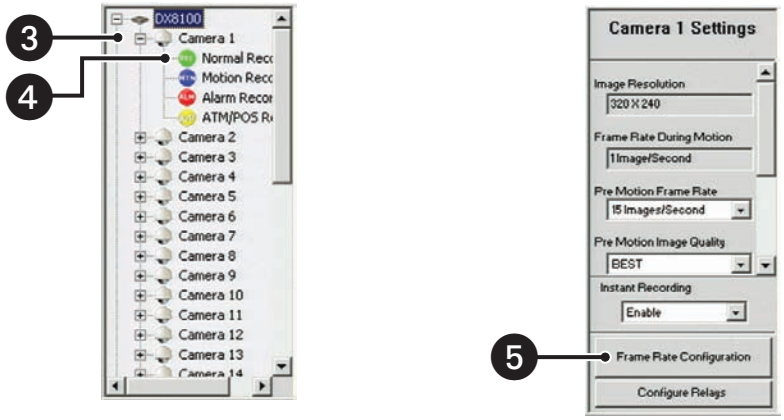

Figure 123. Custom Camera Settings Panel

Examples of Custom Camera Settings

The DX8100 allows you to configure customized camera settings for the following recording modes:

- Normal
- Motion
- Alarm
- ATM/POS

Figure 124 shows camera settings for the supported modes.

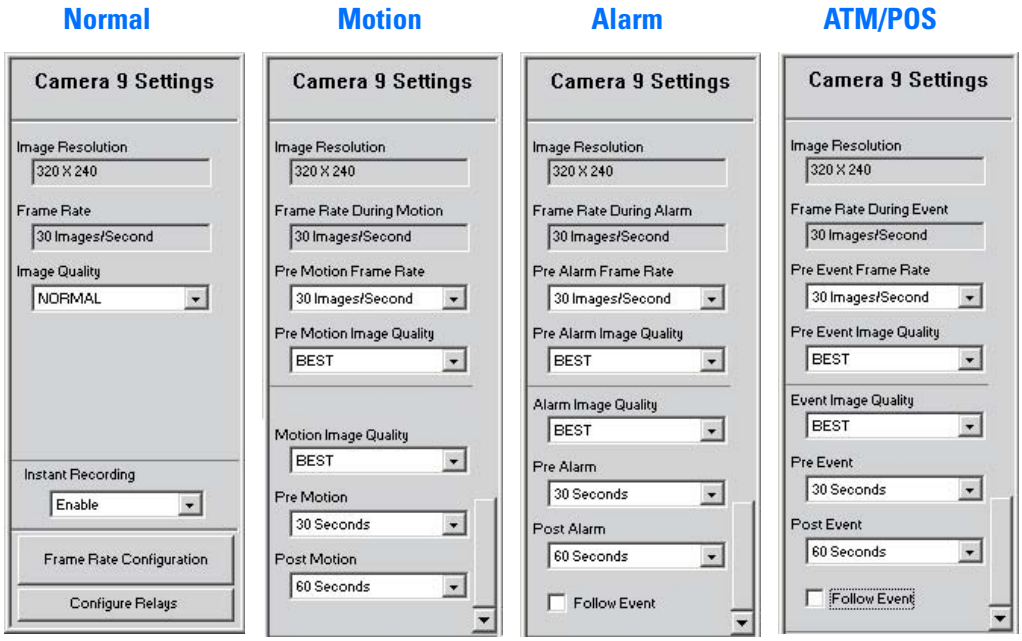

Figure 124. Examples of Custom Camera Settings

Table AE describes the settings for the supported modes.

Table AE. Camera Settings for the Supported Recording Modes

Normal	Motion	Alarm	ATM/POS
Image Resolution*	Image Resolution*	Image Resolution*	Image Resolution*
Frame Rate*	Frame Rate During Motion*	Frame Rate During Alarm*	Frame Rate During ATM/POS*
Image Quality† (Best, High, Normal, Low, Lowest)	Pre-Motion Frame Rate	Pre-Alarm Frame Rate	Pre-ATM/POS Frame Rate
	Pre-Motion Image Quality† (Best, High, Normal, Low, Lowest)	Pre-Alarm Image Quality† (Best, High, Normal, Low, Lowest)	Pre-ATM/POS Image Quality† (Best, High, Normal, Low, Lowest)
	Motion Image Quality† (Best, High, Normal, Low, Lowest)	Alarm Image Quality† (Best, High, Normal, Low, Lowest)	ATM/POS Image Quality† (Best, High, Normal, Low, Lowest)
	Pre-Motion (1-60 sec)	Pre-Alarm (1-60 sec)	Pre-Event (1-60 sec)
	Post-Motion (1-180 sec)	Post-Alarm (1-180 sec)	Post-Event (1-180 sec)

*This field appears for information purposes only. To change this setting, refer to *Configuring the Frame Rate* on page 152.

†Image quality is a function of video compression. Higher quality video images require larger file sizes.

CONFIGURING THE FRAME RATE

The DX8100 can record at frame rates up to 480 ips by National Television System Committee (NTSC) standards and 400 ips by Phase Alternating Line (PAL) standards.

This total frame rate capacity is distributed among 8, 16, 24, or 32 cameras, depending on the configuration of your unit. Resolution and frame rate values can be assigned evenly among all cameras, or they can be configured independently for individual cameras. Frame rate values can also be customized according to recording mode type (normal, motion, alarm, or ATM/POS).

Power Users and Administrators can configure recording frame rates on the DX8100. All cameras are optimized to provide 30 ips frame rates at 320 x 240 resolution for NTSC (352 x 288 resolution for PAL). The DX8100 allows you to change the frame rates available to each camera, while resolution values must remain constant or change both frame rate and resolution settings.

This section describes how to configure the frame rate and includes the following topics:

- *Accessing the Frame Rate Configuration Dialog Box*
- *Setting the Frame Rate*
- *Setting the Resolution and Frame Rate* on page 154
- *Understanding the DX8100 Frame Rate Calculations* on page 159

Accessing the Frame Rate Configuration Dialog Box

To access the Frame Rate Configuration dialog box:

1. From the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Schedule button . The Schedule page is displayed.
3. In the Camera Settings section, click Frame Rate Configuration. The Frame Rate Configuration dialog box opens.

Setting the Frame Rate

The DX8100 Series HVR is optimized to provide 8, 16, 24, or 32 cameras of continuous video recording, with a frame rate of 30 ips at a resolution of 320 x 240 (NTSC) or 320 x 288 (PAL). The DX8100 allows you to change the frame rate independent of the resolution. For information about accessing the Frame Rate Configuration dialog box, refer to *Accessing the Frame Rate Configuration Dialog Box*.

To set the frame rate values for cameras:

1. From the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Schedule button . The Schedule page is displayed.
3. In the Camera Settings section, click Frame Rate Configuration. The Frame Rate Configuration dialog box opens.
4. Select the button for the recording mode you want to configure. Options are as follows:
   - 604
   - 704
   - Normal
   - Motion
   - Alarm
   - ATM/POS
5. Do the following:
   a. Using the ALL frame rate settings slider, set the frame rate for all channels.
   b. To set the frame rate for an individual channel, use the frame rate slider for that channel to select a frame rate from 1-30 ips (according to the available capacity for the channel). The frame rate of an individual channel is limited to the maximum setting of the ALL frame rate slider.

   The frame rate ranges from 1 to 30 ips, depending on the DX8100 Series HVR configuration. The 8-camera HVR has 8 sliders, the 16-camera HVR has 16 sliders, the 24-camera HVR has 24 sliders, and the 32-camera HVR has 32 sliders.
6. Repeat step 5b for each camera you want to configure.
7. Click OK.

8. Click Apply at the Schedule page.

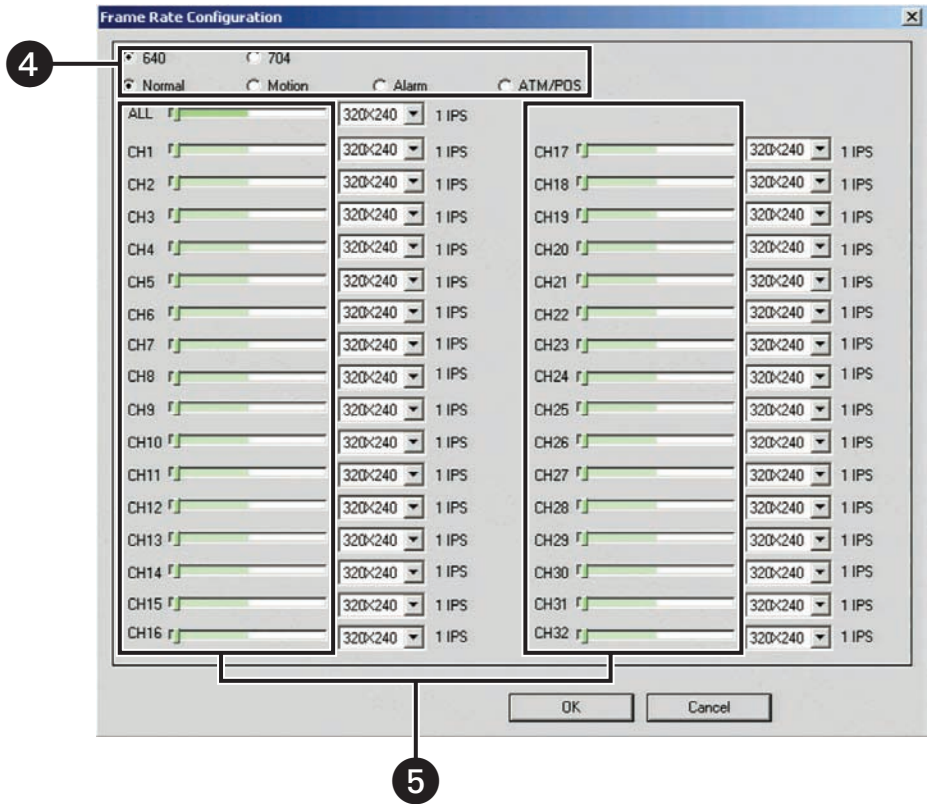

Figure 125. Frame Rate Configuration Dialog Box

Setting the Resolution and Frame Rate

Both resolution and frame rate settings can be adjusted using the Frame Rate Configuration dialog box. For information about accessing the Frame Rate Configuration dialog box, refer to *Accessing the Frame Rate Configuration Dialog Box* on page 152.

To set recording resolution and frame rates for each channel:

1. From the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Schedule button . The Schedule page is displayed.
3. In the Camera Settings section, click Frame Rate Configuration. The Frame Rate Configuration dialog box opens.
4. Select the button for the recording resolution and mode you want to configure. Options are as follows:
   - 640
   - 704
   - Normal
   - Motion
   - Alarm
   - ATM/POS

   The 640 resolution setting is for the standard VGA format. The 704 resolution is for the cropped D1 video (NTSC, PAL).

5. Select resolution values for individual channels from the drop-down boxes. Table AF describes the available resolution values.

   Setting a resolution value for one recording mode sets the resolution value for all modes. For example, setting resolution to 640 x 480 in Motion recording mode will change the resolution to 640 x 480 in Normal and Alarm recording modes as well.

Table AF. Resolution Values

Video Format	NTSC		PAL	
	640	704	640	704
CIF	320 x 240	352 x 240	320 x 288	352 x 288
2CIF	640 x 240	704 x 240	640 x 288	704 x 288
4CIF	640 x 480	704 x 480	640 x 576	704 x 576

6. Do the following:

   a. Using the ALL frame rate settings slider, set the frame rate for all channels.

   b. To set the frame rate for individual channels, use the frame rate slider for each channel to select a frame rate from 1-30 ips (according to the available capacity for that channel). The frame rate of an individual channel cannot exceed the maximum setting of the ALL frame rate slider.

7. Click OK.

8. Click Apply when you return to the Schedule Setup screen.

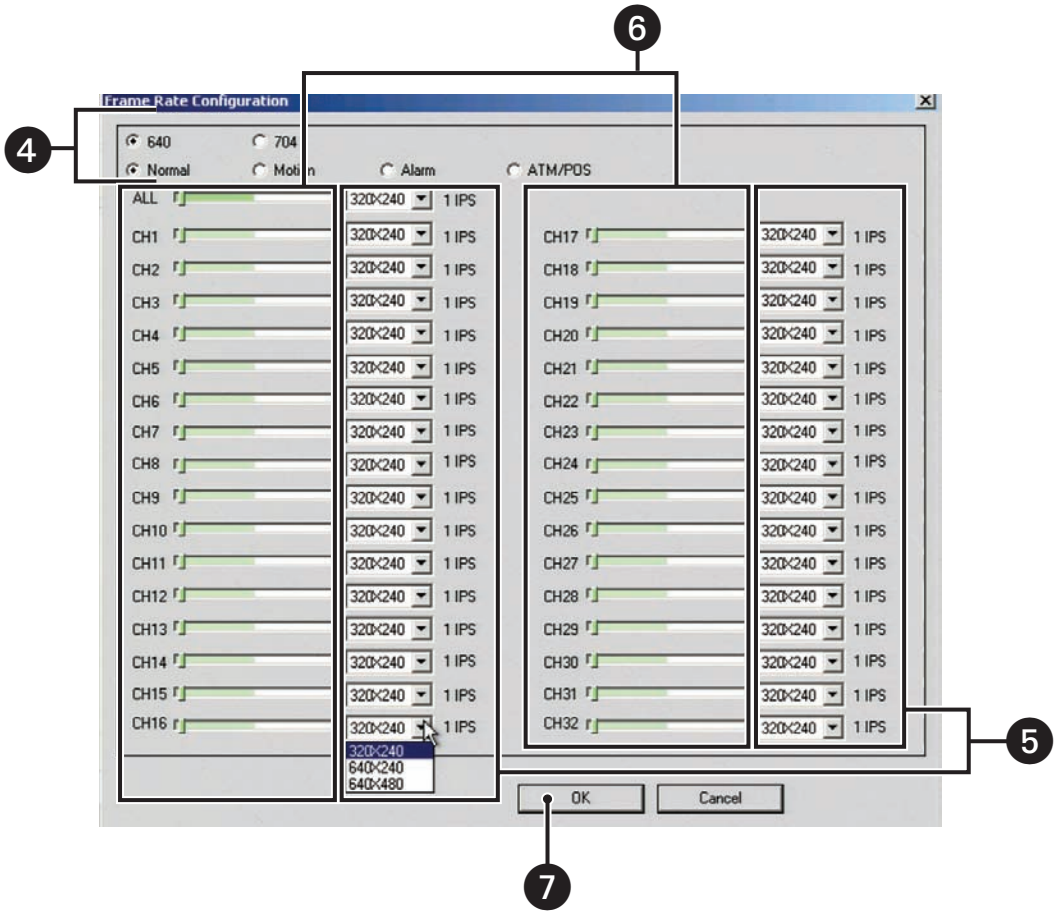

Figure 126. Frame Rate Configuration Screen

Understanding DX8100 Server Maximum IPS Recording

The DX8100 can record at frame rates up to 480 IPS NTSC and 400 IPS PAL. The total frame rate capacity is distributed among 8/16/24/32 channels, depending on the configuration of your unit. Resolution and frame rate values can be assigned evenly among all channels, or they can be configured independently for individual channel. Frame rate values can also be customized according to recording mode (normal, motion, alarm, and ATM/ POS). For information about setting up the DX8100 to record at the maximum rate and resolution, refer to *Setting Up DX8100 for Maximum IPS Recording*.

Table AG. DX8100 Server Maximum IPS Recording

Model	Format	NTSC IPS		PAL IPS	
		Total	Per Camera	Total	Per Camera
DX8108	CIF	240	30	200	25
	2CIF	120	15	100	12
	4CIF	60	7	50	6
DX8116	CIF	480	30	400	25
	2CIF	240	15	200	12
	4CIF	120	7	100	6
DX8124	CIF	360	15	300	12
	2CIF	180	6	150	6
	4CIF	90	3	75	3
DX8132	CIF	480	15	400	12
	2CIF	240	6	200	6
	4CIF	120	3	100	3

Setting Up DX8100 for Maximum IPS Recording

Table AH describes how the DX8100 organizes cameras (channels) into groups of four cameras per group. To achieve the maximum recording rate and resolution: (30 ips at 4CIF [NTSC] or 25 ips at 4CIF [PAL]), enable one camera from each group while the other three cameras in the group are disabled. For information about the various recording rates and resolutions, refer to *Understanding DX8100 Server Maximum IPS Recording*.

Table AH. DX8100 Camera Grouping

Model	Group	Assigned Camera
DX8108	1	1-4
	2	5-8
DX8116	1	1-4
	2	5-8
	3	9-12
	4	13-16

To set up the DX8100 to record at the maximum rate and resolution:

1. Do one of the following:
   - On the DX8100 toolbar, click the Setup button . The Setup dialog opens to the Camera page.
   - If the Setup dialog box is already open, click the Camera button . The Camera page is displayed.
2. In the Camera Properties section, for Group 1, do the following:
   a. Select a camera from the drop-down box. (You can also select a camera from the Site Tree by clicking on it.)
   b. For the camera you want to enable, verify that the Disable check box is not selected.
   c. For the remaining cameras in the group, click the Disable check box to disable the respective camera.
3. Repeat step 2 for Groups 2, 3, and 4 (if applicable).
4. Click Apply.
5. Click the Schedule button . The Schedule page is displayed.
6. Verify that the enabled camera from each group is displayed in the Site Tree.

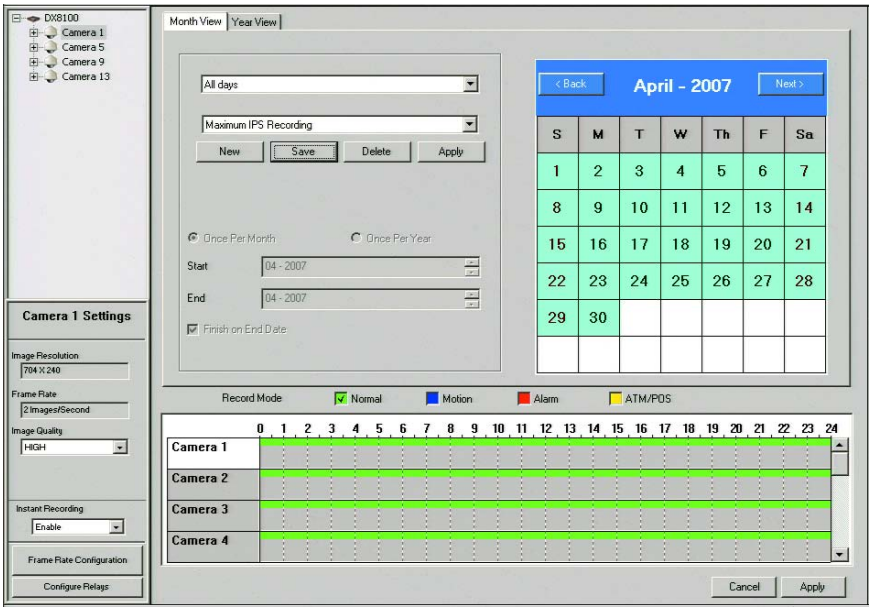

Figure 127. Setting Up DX8100 for Maximum IPS Recording

7. Click the Frame Rate configuration button. The Frame Rate Configuration screen is displayed.

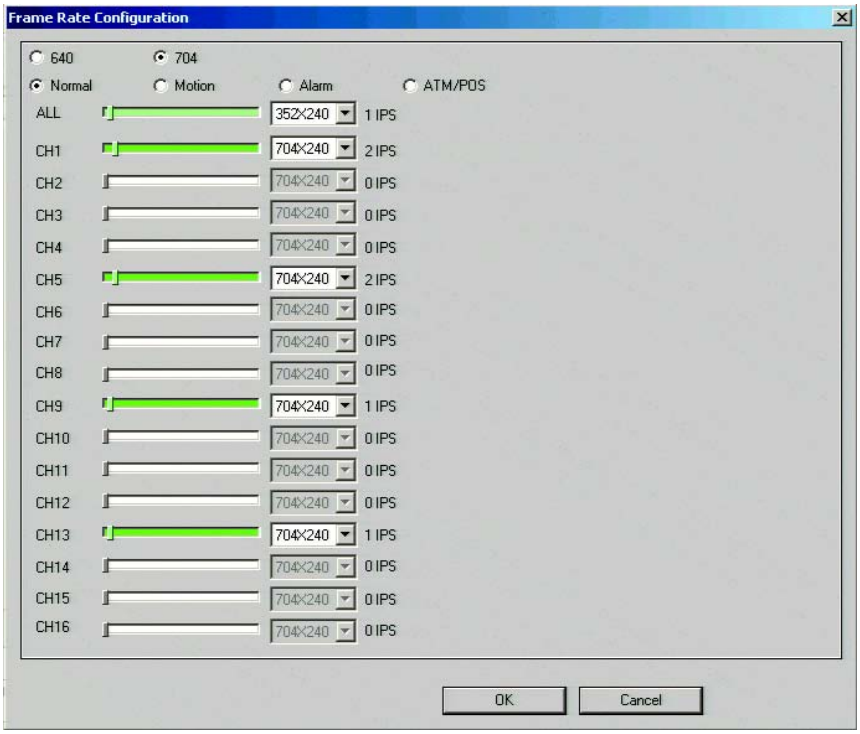

Figure 128. Frame Rate Configuration Screen

8. Do the following:
   a. Using the ALL frame rate settings slider, set the frame rate to 30 ips. The recording rate for each enabled camera is changed to 30 ips.
   b. For the ALL resolution setting, from the drop-down box, select 704 x 480 from the drop-down box. The resolution for each enabled camera is set to 704 x 480.
   c. Click OK.
9. Click Apply at the Schedule page, and verify that each enabled camera listed in the Site Tree is configured to record at 30 ips at 4CIF.

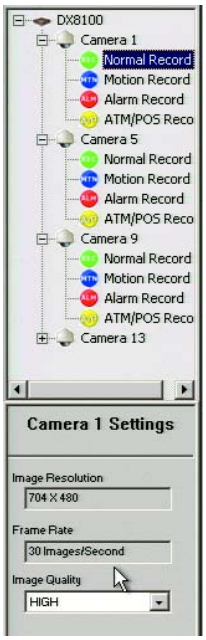

Figure 129. Maximum Rate and Resolution Recording

Understanding the DX8100 Frame Rate Calculations

The DX8100 uses a complex algorithm to calculate the amount of recording resources available for each channel. This calculation takes into account factors such as the number of enabled cameras; whether uniform or mixed resolution values are used; recording type (continuous, alarm, or motion); and the frame rate settings of enabled channels. The resulting calculations provide the operator with a margin of available frame rate capacity to distribute among the recorder's channels. This margin of frame rate capacity, or "headroom," is presented to the user as color-filled sections of the frame rate sliders. White areas on the slider represent frame rate capacity that is not available to that channel. In certain cases, adjusting the available frame rates of one channel or resolution type may free up capacity for other channels. Figure 130 shows the available and unavailable frame rate capacity.

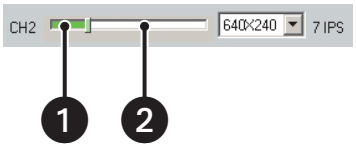

Figure 130. Example of Frame Rate Capacity

Table AI describes the available and unavailable frame rate capacity.

Table AI. Frame Rate Capacity

Item	Description
1	Available frame rate capacity
2	Unavailable frame rate capacity

SETTING UP ADVANCED RELAY OUTPUT

Relays work much like switches. When triggered, relays can activate external devices such as sirens, light fixtures, and door locks. The DX8100 Series HVR allows Administrators and Power users to link relays to cameras and alarms. Up to 20 seconds of delay can be set from the moment an event is triggered to the time when a relay is activated.

Make sure you have linked relays to the appropriate cameras and alarm inputs before attempting to configure them. For instructions on linking alarms and relays, refer to *Linking Alarm Inputs to a Camera* on page 43 and *Linking Relay Outputs to Alarm Inputs* on page 44.

This section describes how to setup advanced alarm and motion relay output and includes the following topics:

- *Configuring Advanced Motion-Activated Relay Output*
- *Configuring Advanced Alarm-Activated Relay Output* on page 161
- *Configuring Advanced ATM/POS-Activated Relay Output* on page 162
- *Configuring Advanced Video Loss-Activated Relay Output* on page 163

Configuring Advanced Motion-Activated Relay Output

To configure a motion relay output:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. In the Setup dialog box, click Schedule button . The Schedule page is displayed.
3. Click the Configure Relays button. The Configure Relays dialog box opens.
4. Click the Motion tab.
5. Configure each relay that is linked to a camera:
   a. Click the drop-down box to select a relay.
   b. Select a relay time value from the Activation Period drop-down box.
6. Click Save.

7. Click Exit.

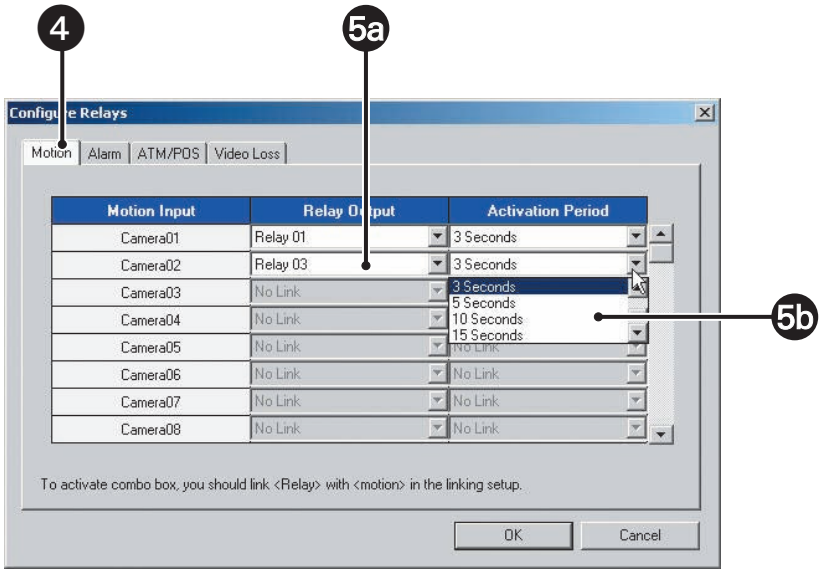

Figure 131. Linking Relays to Motion Detection

Table AJ describes the available motion-activated relay settings.

Table AJ. Motion-Activated Relay Settings

Option	Result
Disable	Relay will not activate when motion is detected.
Follow Event	Relay will activate at the exact moment that motion is detected.
1, 3, 5, 10, 15, and 20 Seconds	Sets the amount of time the relay will remain active after motion has been detected.

Configuring Advanced Alarm-Activated Relay Output

To configure an alarm relay output:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. In the Setup dialog box, click Schedule button . The Schedule page is displayed.
3. Click the Configure Relays button. The Configure Relays dialog box opens.
4. Click the Alarm tab if it is not already selected.
5. Configure each relay that is linked to an alarm:
   a. Click the drop-down box to select a relay.
   b. Select a relay time value from the Activation Period drop-down box.

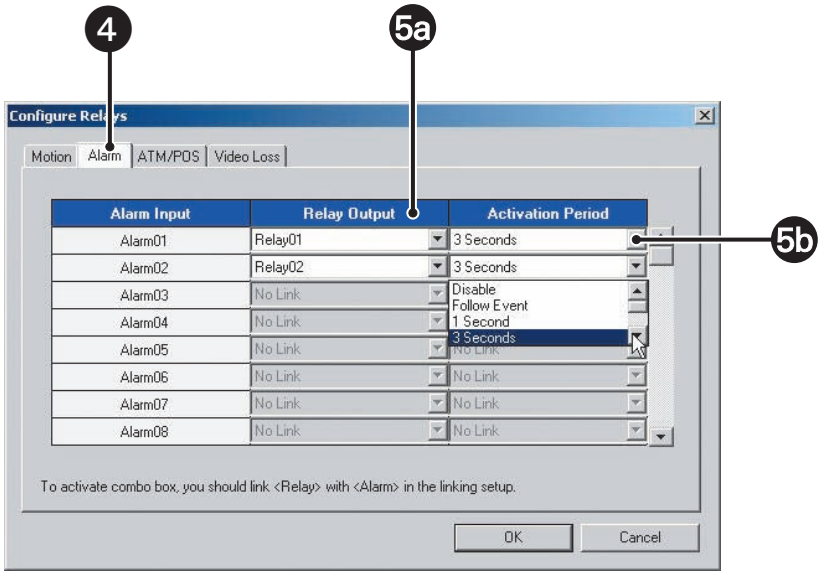

Figure 132. Linking Relays to Alarms

Table AK describes the available alarm-activated options.

Table AK. Alarm-Activated Relay Settings

Option	Result
Disable	Relay will not activate when the alarm is triggered.
Follow Event	Relay will activate at the exact moment the alarm is triggered.
1, 3, 5, 10, 15, and 20 Seconds	Sets the amount of time the relay will remain active after the alarm has been triggered.

Configuring Advanced ATM/POS-Activated Relay Output

To configure an ATM/POS-activated relay output:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. In the Setup dialog box, click Schedule button . The Schedule page is displayed.
3. Click the Configure Relays button. The Configure Relays dialog box opens.
4. Click the ATM/POS tab if it is not already selected.
5. Configure each relay that is linked to an ATM/POS:
   a. Click the drop-down box to select a relay.
   b. Select a relay time value from the Activation Period drop-down box.

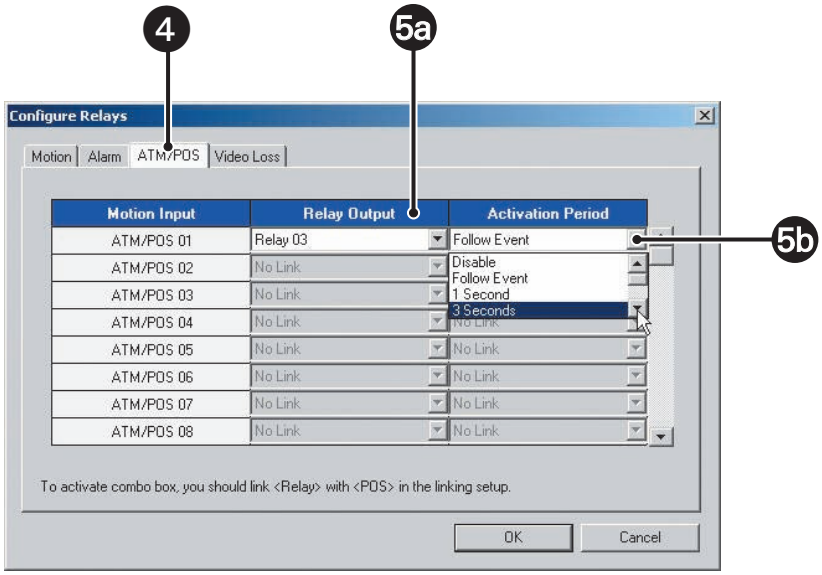

Figure 133. Linking Relays to ATM/POS

Table AL describes the available ATM/POS-activated relay options.

Table AL. ATM/POS-Activated Relay Settings

Option	Result
Disable	Relay will not activate when the ATM/POS event occurs.
Follow Event	Relay will activate at the exact moment the ATM/POS event occurs.
1, 3, 5, 10, 15, and 20 Seconds	Sets the amount of time the relay will remain active after the ATM/POS event occurs.

Configuring Advanced Video Loss-Activated Relay Output

To configure an advanced video loss-activated relay output:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. In the Setup dialog box, click Schedule button . The Schedule page is displayed.
3. Click the Configure Relays button. The Configure Relays dialog box opens.
4. Click the Video Loss tab if it is not already selected.
5. Configure each relay that is linked to an alarm:
   a. Click the drop-down box to select a relay.
   b. Select a relay time value from the Activation Period drop-down box.

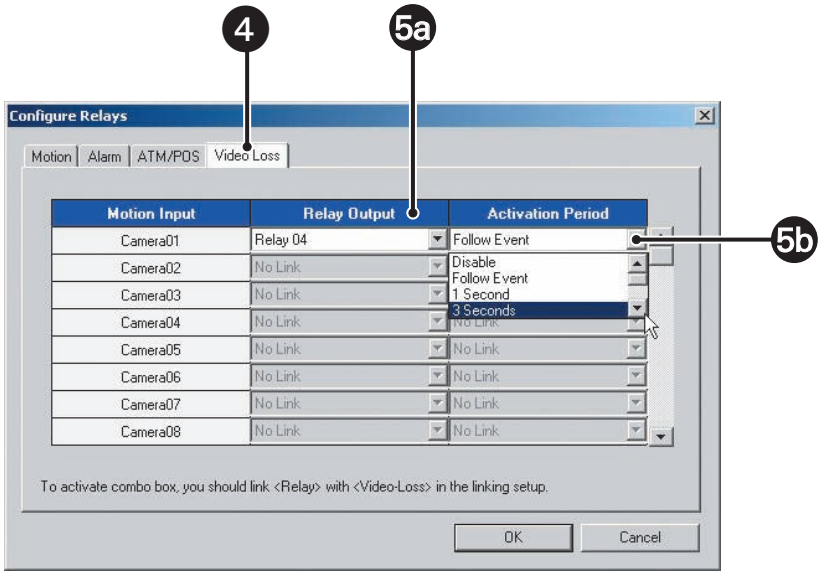

Figure 134. Linking Relays to Video Loss

Table AM describes the available video loss-activated relay settings.

Table AM. Video Loss-Activated Relay Settings

Option	Result
Disable	Relay will not activate when a video loss event occurs.
Follow Event	Relay will activate at the exact moment the video loss event happens.
1, 3, 5, 10, 15, and 20 Seconds	Sets the amount of time the relay will remain active after the video loss event occurs.

SETTING UP NETWORK PROPERTIES

Network settings cannot be changed from the DX8100 Client application. To change a network configuration, you must log in to a local DX8100 Series HVR as an Administrator or Power User. For more information about configuring the DX8100's network settings, refer to DX8100 HVR online Help or the Operation/Configuration manual that was supplied with your unit.

DATA BACKUP SETUP

The DX8100 Client application allows you to see backup configuration settings, but not change them. To configure and perform backups, you must log in to a local DX8100 Series HVR as an Administrator or Power User. For more information about configuring a backup schedule, refer to the *Data Backup Setup* section in the DX8100 HVR Operation/Configuration manual.

For more information about viewing backed up video, refer to *Viewing and Searching Backed up Video* on page 165.

WORKING WITH BACKED UP VIDEO ON THE CLIENT

The DX8100 Client application provides all users the ability to view, search, export, and print previously backed up video data. The DX8100 Client does not have to be connected to the DX8100 server to work with backed up video. Archived data in the Pelco Database (PDB) refers to files stored in the DX8100's native backup format.

This section describes how to view, search, export, and print backed up video, and is organized into the following sections:

- *Viewing and Searching Backed up Video*
- *Exporting and Printing backed up Video* on page 166

VIEWING AND SEARCHING BACKED UP VIDEO

1. Ensure that you have the correct backup device connected directly to your client computer. Example devices include:
   - CD-ROM/R/RW drives
   - DVD-ROM/R/RW drives
   - External drives
   - Shared network storage
2. Insert the backup media into the device.
3. On the DX8100 Client toolbar, click the Search button .
4. From the DX8100 Client menu bar, choose File > Backup Search. The Backup data list appears.

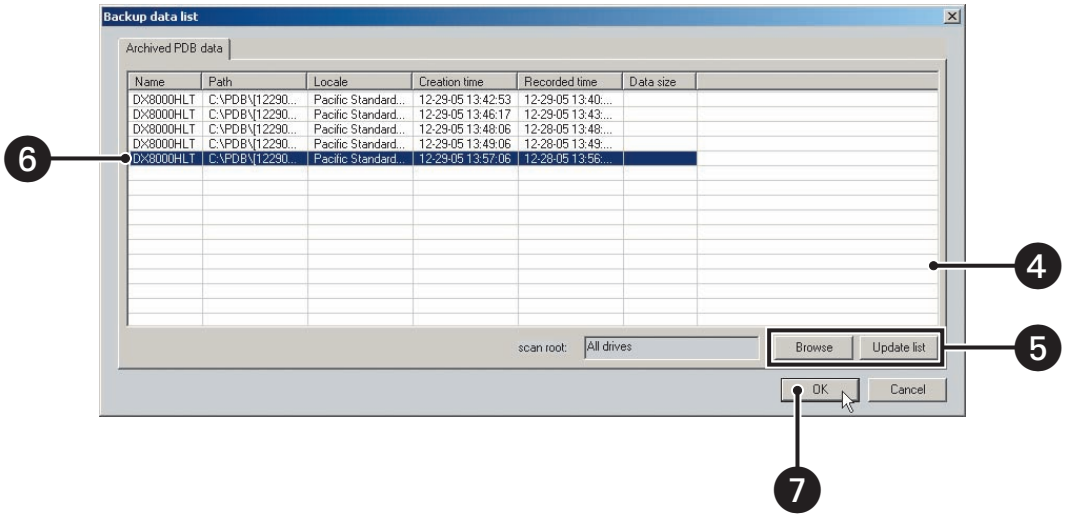

Figure 135. Backup Data List

5. Click "Update list" or Browse to search backup storage devices for DX8100 backup files.
6. Select a file from the list.

7. Click OK. The backup search screen closes. The Site Tree displays only the server and cameras that are recorded in the selected backup file.

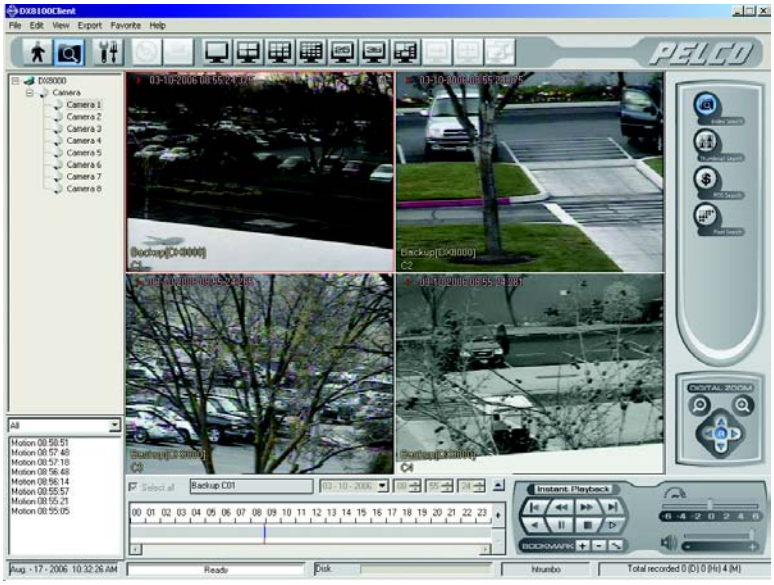

Figure 136. Viewing Backed Up Data

8. Search and play back the backed up video as you would when viewing other forms of video. Refer to *Index Video Search* on page 80, *Thumbnail Video Search* on page 81, and *Pixel Video Search* on page 92.

9. To exit Backup Search and return to the HVR Search mode, go to File > End Backup Search.

EXPORTING AND PRINTING BACKED UP VIDEO

To export and print backed up video:

1. Ensure that you have the correct backup device connected directly to your client computer. Devices might include the following examples:
   - CD-ROM/R/RW drives
   - DVD-ROM/R/RW drives
   - External drives
   - Shared network storage
2. Insert the backup media into the device.
3. On the DX8100 Client toolbar, click the Search button .

4. From the DX8100 Client menu bar, choose File > Backup Search. The Backup data list dialog box opens.

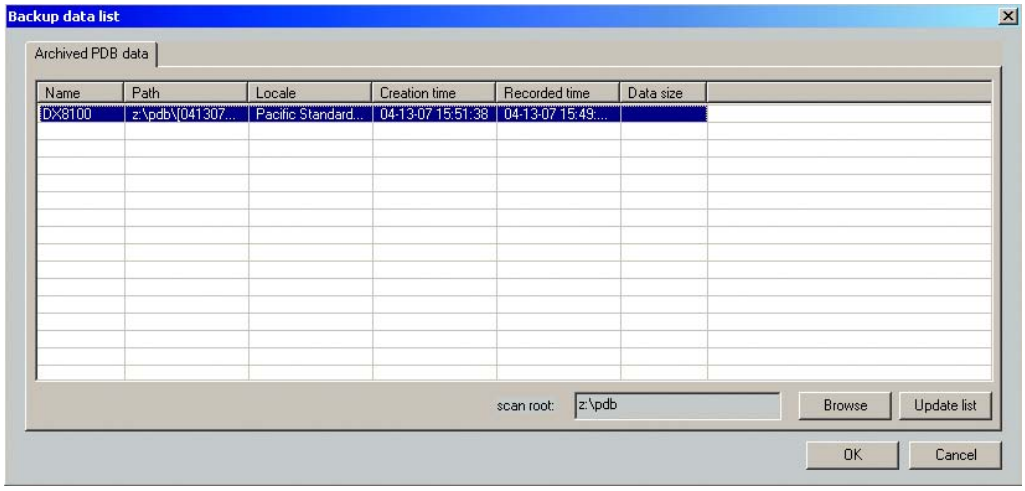

Figure 137. Backup Search Screen

5. Click "Update list" or Browse to search backup storage devices for DX8100 backup files.
6. Select a file from the list.
7. Click OK. The backup search screen closes. The Site Tree displays only the server and cameras that are recorded in the selected backup file.

Figure 138. Viewing Backed Up Data

8. To export or print backed up video, do one of the following:
   - To export backed up video, refer to *Exporting Video* on page 96.
   - To print backed up video, refer to *Printing Images* on page 69.
9. To exit Backup Search and return to the HVR Search mode, go to File > End Backup Search.

USER SETUP

The User page allows an Administrator (Admin) to add, delete, and change the properties of users. Admin has full permission to configure all of the DX8100 features, and it is the only user level that can change permissions for all lower level users. Users are subdivided into groups and each group is granted a particular level of access. A lower level user cannot have a larger set of permission than a higher level user.

This section describes how to configure users and includes the following topics:

- *Accessing the User Page*
- *Built-in User Accounts* on page 169
- *Definition of User Access Levels* on page 170
- *Definition of Camera Security Access* on page 170
- *Adding New Users* on page 171
- *Modifying User Properties* on page 172
- *Changing User Passwords* on page 173
- *Changing a User's Group Affiliation* on page 173
- *Deleting Existing Users* on page 173
- *Setting Login Timeout* on page 173
- *Assigning Automatic Login Permission to a User* on page 174

ACCESSING THE USER PAGE

To access the User page:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the User button . The User page is displayed.

Figure 139 shows the parts of the User page.

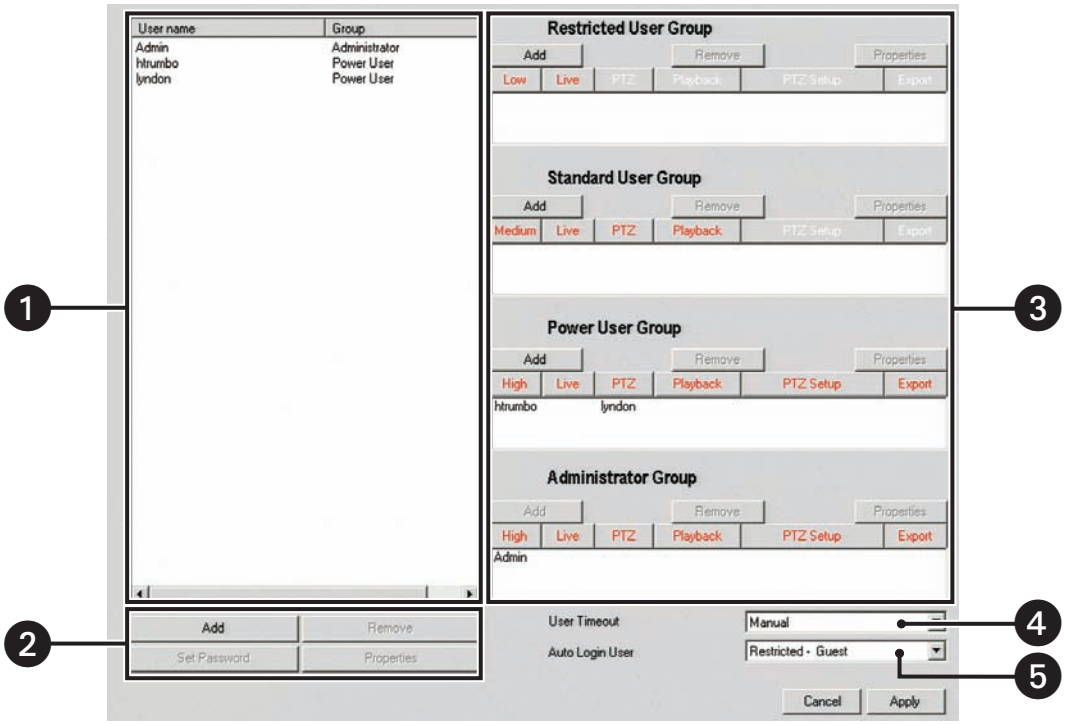

Figure 139. User Page

Table AN describes the parts of the User page.

Table AN. Parts of the User Page

Item	Part	Description
1	User Name Table	Lists the authorized users.
2	User Buttons	Allows you to do the following: • **Add:** Opens the Add New User dialog box, to create a new user account. • **Remove:** Deletes the selected user. • **Properties:** Opens the Properties dialog box, to view and modify user details. • **Set Password:** Opens the Set Password dialog box, to specify or modify the user's password.
3	User Groups	Allows you to create user accounts for the following user groups: • Power • Standard • Restricted The DX8100 allows the administrator to configure access rights to any user group for the following functions: • Camera security • View live video • Operate PTZ • Playback video • Set PTZ • Access export menu For more information about user groups, refer to *Definition of User Access Levels* and *Definition of Camera Security Access* on page 170.
4	User Timeout	Allows you to configure the amount of time a user is allowed to remain logged on to the DX8100 system, before the system automatically logs out. The time period is from 5-60 minutes (in increments of 5 minutes). The manual setting allows the user to stay logged on to the DX8100 until the user is manually logged off.
5	Auto Login User	Allows you to configure a user to log on to the DX8100 automatically.

BUILT-IN USER ACCOUNTS

There are two built-in user accounts that come pre configured with the DX8100, which cannot be deleted or changed.

- **Guest:** The Guest account provides limited access to the system. The Guest user can view live video but cannot play back recorded video or access system configuration functions. The Guest account automatically becomes active when the system is first started and each time a user logs out. The Guest user is not a member of any group; however, a Guest retains all of the rights and privileges of the Restricted Users group, including the ability to view low security cameras. If you do not want video from a low security level camera to be viewed by the Guest user, set the security level for that camera to medium or higher.
- **Admin:** The Admin account has full access to the system. The Admin user can view live and playback video, access all configuration settings, add and modify users, and can perform searches and backups. The Admin user is a member of the Administrators group and cannot be removed.

DEFINITION OF USER ACCESS LEVELS

There are four predefined user access levels or groups. User access levels range from the Administrator group to the Restricted group. By default, the system starts up with a default Guest account. The Admin user can assign automatic login for a specified user. For information about setting up auto login, refer to *Assigning Automatic Login Permission to a User* on page 174.

The Guest account has Restricted user access. Table AO describes the default user group access rights.

Table AO. Default User Group Access Rights

User Groups	View Live Video	View Recorded Video	Operate PTZ	Search Video	Backup Video	System Setup	Shut Down System	Add/ Remove Users	Change User/Group Properties	Exit to Windows
Administrators	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
Power Users	✔	✔	✔	✔	✔	✔	✔			
Standard Users	✔	✔	✔	✔						
Restricted Users	✔									
Guest Users	✔									

DEFINITION OF CAMERA SECURITY ACCESS

The administrator can limit the cameras that users are allowed to view. Access to a camera is determined by its security designation. The Admin user can configure access rights to any user group, for any of the following functions:

- Camera security
- View live video
- Operate PTZ
- Playback video
- Set PTZ
- Access export menu

Only users with High Security access can view cameras designated as High Security. Medium Security cameras can be viewed by users with Medium Security access and higher. All users can view Low Security cameras. All users can view No Security cameras. If you do not want video from a low security level camera to be viewed by the Guest user, set the security level for that cameras to medium or higher.

Table AP describes the default camera security levels and user access.

Table AP. Default Camera Security Levels

Groups	No Security Cameras	Low Security Cameras	Medium Security Cameras	High Security Cameras
Administrators	✔	✔	✔	✔
Power Users	✔	✔	✔	✔
Standard Users	✔	✔	✔	
Restricted Users	✔	✔		
Guest Users	✔			

MODIFYING USER ACCESS RIGHTS

The Admin user can alter default access rights of lower level users. In this case, any permission granted to a lower level user, must first be granted to all other higher level users. For example, export rights must first be granted to the Standard user before they can be granted to a Restricted user.

Click the user group buttons to enable/disable the access right for each access category. The access right category is enabled when the button's text is red (permission granted), and it is disabled when the button's text is white (permission not granted). Click a button to toggle the access right, on and off. Repeatedly clicking the Camera Security button cycles through the security levels (none, low, medium, and high).

To modify a user's access rights:

1. On the DX8100 toolbar, click (icon). The Setup dialog box opens to the Camera page.
2. Click (icon). The User page is displayed.
3. Do one of the following:
    a. To grant an access right to a user, left click on an access right button above the user's group list. The text will toggle from white to red and that permission will be active for that user.
    b. To deny an access right to a user, left click on an access right button above the user's group list. The text will toggle from red to white and that permission will be denied for that user.
4. Click Apply.

ADDING NEW USERS

Administrators can create new user accounts and modify existing users; this can be done locally on the DX8100 server or remotely from the DX8100 Client Application.

User names and passwords have the following requirements:

- User names can be between 4 and 20 alphanumeric characters in length.
- User passwords can be between 4 and 10 alphanumeric characters in length.
- User names cannot contain spaces and special characters.
- User names and passwords are case sensitive.

To add a new user:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the User button . The User page is displayed.
3. Click Add. The Add New User dialog box opens.
4. Do the following:
    a. Enter a login name for the user.
    b. Enter the user's full name.
    c. Enter a brief description for the user. For example, enter Building 6 Security Guard.
    d. Enter a password for the user. (Passwords must be between 4 and 10 characters in length and cannot contain spaces and special characters.)
    e. Re-enter the same password to confirm.
5. Click Next. The user access level options for the New User dialog box are displayed.
6. Select the user's access level: Restricted, Standard, or Power.
7. Click Finish.

8. Click Apply.

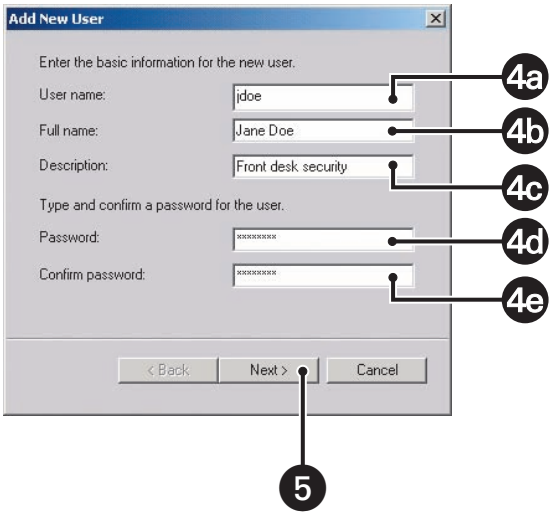

Figure 140. Add New User Dialog Box

MODIFYING USER PROPERTIES

Follow the steps below to change user attributes, such as user name and group affiliation. Users with Admin or Power User access can change name and description properties of lower level users. However, only Admin level users can change a user's group affiliation.

To modify a user's properties:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the User button . The User page is displayed.
3. Do one of the following:
   - In the main user list:
     (1) Click a user name.
     (2) Click Properties. The Property dialog box opens.
   - In one of the group lists:
     (1) Click a user name.
     (2) Click Properties. The Property dialog box opens.
4. Edit the following user properties:
   - User name
   - Full name
   - Description
   - Group
5. Click Apply in the Property dialog box.
6. Click Apply in the User Setup screen.

An Administrator level user can also change the group affiliation of users by dragging user names to different groups.

CHANGING USER PASSWORDS

Administrators and Power Users can change or reset an existing user's password.

To change a user's password:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the User button . The User page is displayed.
3. Click a user name in the main user list.
4. Click Set Password. The Set Password dialog box opens.
5. Enter a new password in the "New password" field.
6. Retype the password again in the "Confirm new password" field.
7. Click Apply in the Set Password dialog box.
8. Click Apply in the User Setup screen.

CHANGING A USER'S GROUP AFFILIATION

An Administrator level user can also change users' group affiliation of users by dragging user names to different groups.

To change a user's group affiliation:

- In the User name column of the User page, click the user's name and drag it into a group.

DELETING EXISTING USERS

Administrators can delete existing users.

To delete a user's account:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the User button . The User page is displayed.
3. Click the user name of the user you want to delete from the main user list.
4. Click Remove. The Remove User dialog box opens.
5. Click Yes to confirm the deletion or No to cancel and return to the User Setup screen.
6. Click the Apply button at the bottom of the screen.

SETTING LOGIN TIMEOUT

Administrators can define the amount of time a user's account can remain idle before having to log in again. This setting applies to all users, regardless of access level.

To set login timeout:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the User button . The User page is displayed.
3. Select a time limit from the User Timeout drop-down box.
   - Time limits range from five minutes to one hour, in five-minute increments.
   - Selecting Manual from the drop-down box will suspend the automatic logout feature. (A user will remain logged in until the user logs out or another user logs in.)
4. Click Apply.

ASSIGNING AUTOMATIC LOGIN PERMISSION TO A USER

The DX8100 allows one user to automatically log in to the DX8100 application. The administrator must assign automatic login permission to the user. Once automatic login permission is assigned to the user, the user will be automatically logged in to the DX8100 application. In this case, the assigned user does not have to enter the user name and password.

NOTE: Automatic login user permission makes the DX8100 more vulnerable because a higher level user is logged in every time.

To assign automatic login permission:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the User button . The User page is displayed.
3. In the Auto Login User drop-down selection box, select a user.
4. Click Apply.

   The next time the DX8100 application is started, the assigned user is logged in automatically.

SITE SETUP

The DX8100 Client application does not allow you to access the Site page to configure remote sites. You must log in to the local DX8100 Series HVR as an Administrator or Power User to configure remote sites. For more information about configuring remote sites, refer to the DX8100 HVR server online Help or the Operation/Configuration manual that came with your unit.

SYSTEM SETUP

Many of the options presented in the System page cannot be configured from the DX8100 Client application. Administrators and Power Users are allowed to import and export system configuration files and view and export system logs. To modify other system setup options, you must log in to the local DX8100 Series HVR as an Administrator or Power User. For more information, refer to the DX8100 HVR online Help or the Operation/Configuration manual that came with your unit.

This section describes how to configure system options and parameters, including the following topics:

- *Accessing the System Page* on page 174
- *Working with the Export Feature* on page 174
- *Working with the Import Feature* on page 175
- *Using System Logs* on page 177

ACCESSING THE SYSTEM PAGE

To access the System page:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the System button . The System page is displayed.

WORKING WITH THE EXPORT FEATURE

The DX8100 provides an import and export feature that allows you to save and reload DX8100 configuration settings. You can save your DX8100 HVR configuration settings by exporting them to a specific storage location. You can reload a specific configuration profile by importing its configuration file.

NOTE: The DX8100 Export feature backs up all configuration settings to the target device; however, the target device setting is not restored after the import process is executed. The target device setting must be re-entered before the scheduled backup routine can execute.

This sections describes how to use the import and export feature, including the following topics:

- *Exporting the Current HVR Settings*
- *Using the Edit Menu to Perform an Export* on page 175

Exporting the Current HVR Settings

To save current HVR configuration settings:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the System button . The System page is displayed.
3. Select the Export button.
4. Select the check boxes of each configuration item you want to back up. Click Select All to export all settings.
5. Do one of the following:
   a. To specify the file name to which you want to export, enter the drive, path and file name information into the box. Setting file names follow standard Windows file-naming conventions, for example, C:\DX8100\Jan_2004_config.bak.

   or

   b. To browse for a location:
      (1) Click Browse.

      The DX8100 Setup File Export Dialog box opens.

      (2) Enter a file name in the "File name" box.

      (3) Navigate to the drive and folder in which you want to save the settings file.

      (4) Click the Up button to move up a level in the folder hierarchy.

      (5) Click Save.
6. Click Export Now.

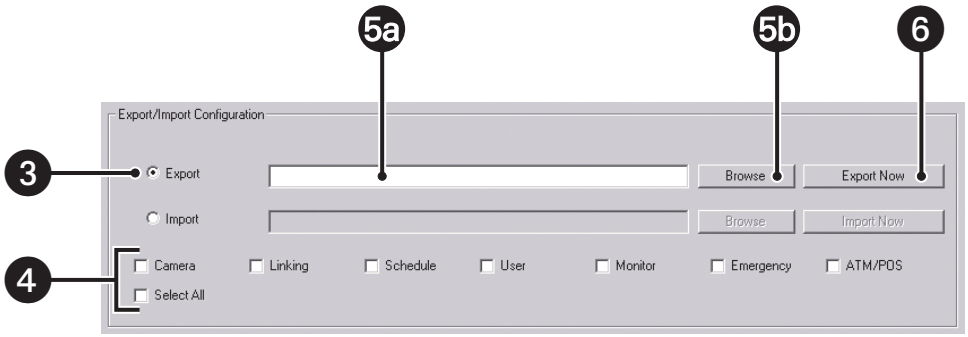

Figure 141. Exporting HVR Settings

Using the Edit Menu to Perform an Export

To save the current HVR settings:

1. From the DX8100 menu bar, choose Edit > Export Setup.

   The DX8100 Setup File Export Dialog box opens.
2. Select the folder in which you want to save the settings file.
3. Click the Up button to move up a level in the folder hierarchy.
4. Enter a file name in the space provided.
5. Click Save.

WORKING WITH THE IMPORT FEATURE

This sections describes how to import DX8100 HVR settings and includes the following topics:

- *Importing HVR Settings*
- *Using the Edit Menu to Perform an Import* on page 176

Importing HVR Settings

To import a saved settings file:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the System button . The System page is displayed.
3. Select the Import button.
4. Do one of the following:
   a. To specify the file name for import, enter the drive, path, and file name information in the box. Settings file names follow standard Windows file-naming conventions. For example, C:\System Settings Backup.bak.

   or

   b. To browse for a location:
      (1) Click Browse. The DX8100 Setup File Export Dialog box opens.
      (2) Navigate to the drive and folder where the settings file is located.
      (3) Click the Up button to move up a level in the folder hierarchy.
      (4) Select the settings file you want to open.
      (5) Click Open.
5. Click Import Now.
6. Click Apply.

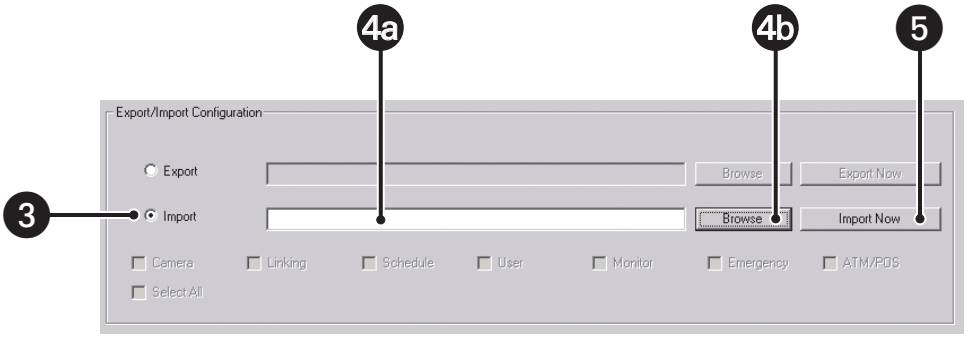

Figure 142. Import DX8100 Configuration

Using the Edit Menu to Perform an Import

To import a settings file from a specific drive or folder:

1. From the DX8100 menu bar, choose Edit > Import Setup.

   The DX8100 Setup File Import Dialog box opens.
2. Select the folder location of the file you want to import.
3. Click the Up button to move up a level in the folder hierarchy.
4. Click the settings file you want to open.
5. Click Open.

USING SYSTEM LOGS

The DX8100 automatically stores system information in a number of log files. Users with Power User or greater permissions can use these files to track system statistics and monitor security. The DX8100 allows you to view its activity log files.

NOTE: If the Log View dialog box displays multiple System On notifications, but does not display any System Off notifications, the unit has failed. Contact Pelco Product Support for more information.

This section describes how to use the system logs and includes the following topics:

- *Viewing a Log File* on page 177
- *Exporting Log Information* on page 178

The log views are available from the DX8100 server's View menu.

Viewing a Log File

To view a log file:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the System button . The System page is displayed.
3. In the Log Information section, select a log file from the Choose drop-down box.
4. Click View. The Log View dialog box opens.

   Figure 143 shows the Log View dialog box.

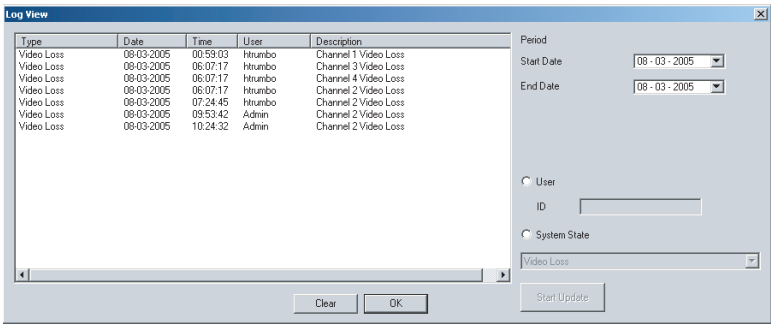

Figure 143. Log View Dialog Box

Exporting Log Information

To export a system log file:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click System button . The System page is displayed.
3. In the Choose drop-down box, select a log file.
4. Click Save As.
5. Select the drive and folder in which you want to store the log file.
6. Enter a filename for the log information in the space provided.

   Log file names follow standard Windows file-naming conventions. Alternately, you can view log files by clicking View > Log and then selecting the desired log file. Log files can be opened and printed using a text editing program, such as Windows Notepad.
7. Click Save.

EXTERNAL MONITOR SETUP

The external monitor settings for the capture card of a remote HVR cannot be changed from the DX8100 Client application. To change the analog monitor configuration, you must log in to a local DX8100 Series HVR as an Administrator or Power User. For more information about configuring the optional analog monitor outputs of the capture card, refer to the DX8100 HVR online Help or the Operation/Configuration manual that came with your unit.

EMERGENCY NOTIFICATION SETUP

The Emergency Agent Notification alerts selected clients to motion, alarm, and video loss events detected by DX8100 server sites. When a motion, alarm, or video loss event is triggered, a pop-up window opens on the monitor of the remote site client. The window displays one or more still images taken during the event.

Users with Power User access and higher can configure the emergency agent notification system. The first step in the setup process requires that clients be added to the emergency agent notification list. To complete this step, you must provide a valid name and the IP address of each client computer. After clients have been added they can be linked to one or more cameras. Finally, the amount of time a server sends images after an event occurs and the interval between sending each image must be set.

NOTE: Before configuring the Emergency Agent Notification, make sure the Emergency Agent Client utility is installed on one or more client computers. For information about installing the Emergency Agent Client utility, refer to *Installing the Client Emergency Agent Application* in this manual.

This section describes how to setup emergency notification and includes the following topics:

- *Accessing the Emergency Agent Notification Setup*
- *Adding Client Emergency Agents to be Notified*
- *Changing Client Emergency Agent Properties* on page 179
- *Deleting Clients from the Notification List* on page 179
- *Linking Cameras to Client Emergency Agents* on page 179
- *Setting Server Event Transmission Time* on page 180

ACCESSING THE EMERGENCY AGENT NOTIFICATION SETUP

To access the Emergency Agent Notification setup:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Notification button . The Notification page is displayed.

ADDING CLIENT EMERGENCY AGENTS TO BE NOTIFIED

After clients have been added, cameras must be configured to notify individual clients of an event. A single camera can be linked to one or more client emergency agents. For information about linking cameras to client emergency agents, refer to *Linking Cameras to Client Emergency Agents* on page 179.

To add clients to the Emergency Agent Notification list:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Notification button . The Notification page is displayed.
3. Click Add. The Agent Setup dialog box opens.
4. Do the following:
   a. Enter a name for the client. (Client names can be up to 63 characters and can include spaces, but not special characters.
   b. Enter the client's IP address.
   c. If necessary, enter a port number in the Agent Port box. (The default port number is 9004.)

      Unless there is a conflict on your network, you should not change the Emergency Agent port number from its default of 9004. Make sure any changes to port numbers are made consistently across all DX8100 servers and clients on a network. Client and server ports must be identical.
5. Click OK.
6. Click the Apply button at the bottom of the screen.

CHANGING CLIENT EMERGENCY AGENT PROPERTIES

To change an existing client's information in the emergency notification list:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Notification button . The Notification page is displayed.
3. Do the following:
   a. In the Emergency Agent Setup section, select a client from the list.
   b. Click Edit. The Agent Setup dialog box opens.
   c. Enter a new name for the client. (Client names can be up to 63 characters long and can include spaces, but not special characters.)
   d. Enter a new IP address for the client.
   e. If necessary, enter a port number in the Agent Port box. (The default port number is 9004.)

      Unless there is a conflict on your network, you should not change the Emergency Agent port number from its default of 9004. Make sure any changes to port numbers are made consistently across all DX8100 servers and clients on a network. Client and server ports must be identical.
4. Click OK.
5. Click the Apply button at the bottom of the screen.

DELETING CLIENTS FROM THE NOTIFICATION LIST

To delete a client from the emergency notification list:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Notification button . The Notification page is displayed.
3. Do the following:
   a. In the Emergency Agent Setup section, select a client from the list.
   b. Click Delete. The selected client is deleted.
4. Click Apply.

LINKING CAMERAS TO CLIENT EMERGENCY AGENTS

After clients have been added, cameras must be configured to notify individual clients about an event. A single camera can be linked to one or more client emergency agents.

Up to 32 IP addresses can be assigned to each camera. The DX8100 can transmit up to 10 IP addresses simultaneously.

To link a camera to one or more clients:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Notification button . The Notification page is displayed.
3. In the Camera Setup section, click a camera button (Camera 1-32). The Emergency Agent Selection dialog box opens.
4. Click the check box to select the name of the client site you want to notify when a motion, alarm, or video loss event is detected by this camera.
5. Repeat steps 1 and 2, for up to 32 cameras on the current site.
6. Click the Apply button at the bottom of the screen.
7. Configure the server event transmission time. For information about setting the duration and transmission interval, refer to *Setting Server Event Transmission Time* on page 180.

SETTING SERVER EVENT TRANSMISSION TIME

After clients have been added and linked to cameras, you must set the amount of time a server sends images after an event occurs and the interval between sending each image (for one of more clients). For information about adding clients, refer to *Adding Client Emergency Agents to be Notified* on page 178. For information about linking cameras, refer to *Linking Cameras to Client Emergency Agents* on page 179.

To set the duration for sending images and the transmission interval:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Notification button . The Notification page is displayed.
3. In the Option section of the Emergency Agent page, enter the amount of time (in seconds) that you want the DX8100 to continue sending still images after an alarm, motion, or video loss event has been detected.
4. Enter the time interval (in seconds) that you want the DX8100 to wait between sending each still image.
5. Click Apply.

EMERGENCY E-MAIL NOTIFICATION SETUP

The DX8100 can be configured to send e-mail notifications alerting users of motion, alarm, and video loss events. Users with Power User access and higher can configure the notification function. Notifications can be sent to a single e-mail address or a group of addresses, either immediately after an event occurs or periodically according to a predefined schedule. You can configure up to 32 e-mail groups, and up to 32 members can be assigned to each e-mail group.

Before sending notifications, you must provide information about your e-mail server and establish the events (motion, alarm, and video loss) that you want to include in the e-mail message. Timing and frequency of the e-mail notifications must also be set. You should test the e-mail notification function immediately after configuration to ensure your system is set up correctly.

NOTES:

- To use emergency e-mail notification, the DX8100 Series HVR must be connected to a LAN that maintains an SMTP mail server. The network must also be connected to either an intranet or the Internet depending on the location of the e-mail accounts to which you want to send notifications. Consult your network administrator for information about configuring e-mail notification on your local network.
- The DX8100 does not support the Secure Sockets Layer (SSL) protocol required by Simple Mail Transfer Protocol (SMTP) servers.
- The DX8100 does not support Google™ Gmail.

This section describes how to set up emergency e-mail notification and includes the following topics:

- *Accessing the Emergency E-mail Notification Setup* on page 181
- *Configuring Emergency E-mail Notification* on page 181
- *Setting Up the Time Period* on page 183
- *Sending E-mail Notifications* on page 190

ACCESSING THE EMERGENCY E-MAIL NOTIFICATION SETUP

To access the emergency e-mail notification setup:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Notification button . The Notification page is displayed.
3. Click the Emergency E-mail Notification Setup tab.

CONFIGURING EMERGENCY E-MAIL NOTIFICATION

This section describes how to set up emergency e-mail notification and includes the following topics:

- *Enabling or Disabling E-mail Notification*
- *Setting Up the E-mail Server*
- *Testing E-mail Notification* on page 182

Enabling or Disabling E-mail Notification

To enable or disable emergency e-mail notification:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Notification button . The Notification page is displayed.
3. Click the Emergency E-mail Notification Setup tab.
4. In the Emergency E-mail Notification page, do one of the following:
   - Click the Enable Notification button to enable e-mail notification.
   - Click the Disable Notification button to disable e-mail notification.

Setting Up the E-mail Server

Set up the e-mail server in the Emergency E-Mail Notification page. For information about accessing the Emergency E-Mail Notification page, refer *Accessing the Emergency E-mail Notification Setup* on page 181.

To set up the e-mail server:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Notification button . The Notification page is displayed.
3. Click the Emergency E-mail Notification Setup tab.
4. Enter a name in the Full Name box. You should enter a name that reflects the DX8100 server sending the notification (for example, DX8100 First Floor Lobby). Names can be up to 31 characters long and can include spaces. but not special characters.
5. Enter your e-mail address in the E-mail Address box.
6. Enter the address of your local SMTP mail server. Obtain this information from your network administrator.
7. If your e-mail server requires you to log in, do the following:
   a. Select the check box labeled My E-mail Server Requires Authentication.
   b. Enter your e-mail server address.
   c. Enter your user name. (User names can be up to 31 characters in length and cannot include spaces or special characters.)
   d. Enter your password. (Passwords can be up to 19 characters in length and cannot include spaces or special characters.)

8. Click Apply.

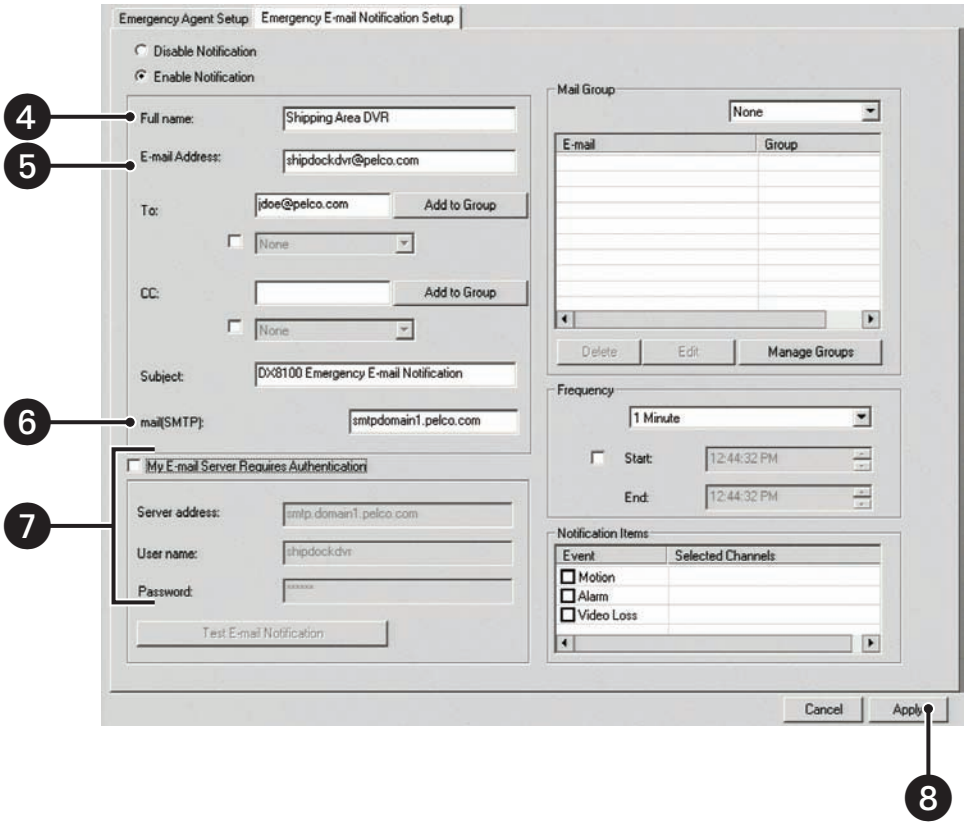

Figure 144. Basic E-mail Notification Setup

Testing E-mail Notification

You test the e-mail notification configuration in the Emergency E-mail Notification page. For information about accessing the Emergency E-mail Notification page, refer *Accessing the Emergency E-mail Notification Setup* on page 181.

To test e-mail notification:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Notification button . The Notification page is displayed.
3. Click the Emergency E-mail Notification Setup tab.
4. Select the My E-mail Server Requires Authentication check box (if it is not already selected).
5. Enter your personal e-mail address or the address of someone who can verify the receipt of the test e-mail in the To box.
6. Type **DX8100 E-mail Notification Test** in the Subject box.
7. Enter the following server settings if necessary:
   - Server address (This address should be the same as the SMTP server address you entered above.)
   - User name
   - Password

8. Click Test E-mail Notification.

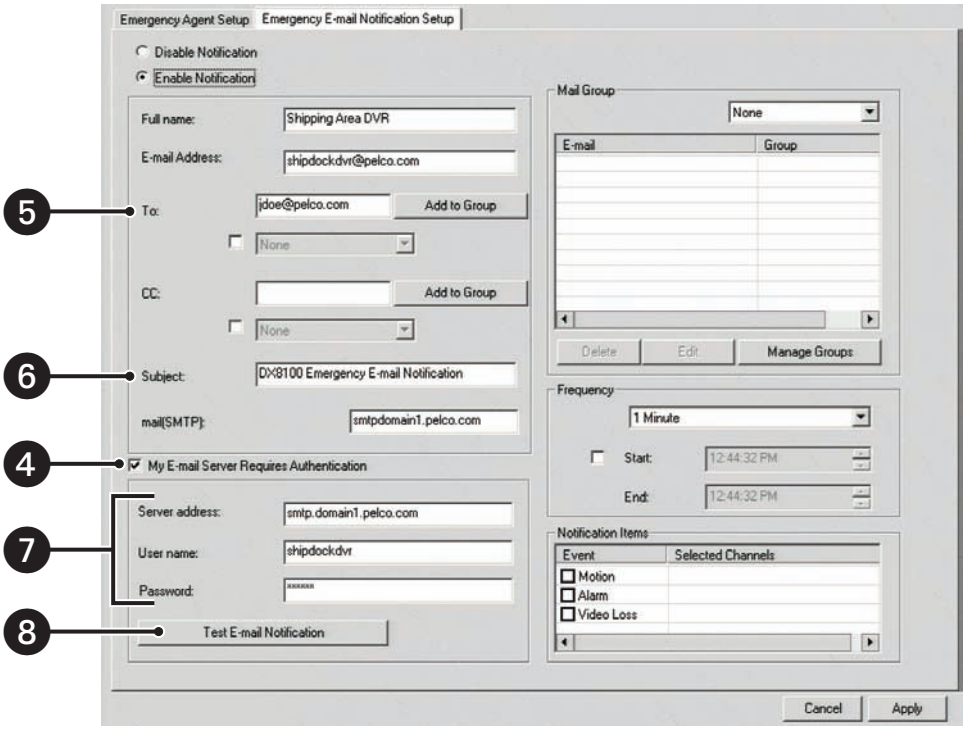

Figure 145. E-Mail Test

SETTING UP THE TIME PERIOD

The DX8100 can be configured to send e-mail notifications on a periodic basis, such as once every ten minutes. This sections describes how to set up the time period and includes the following topics:

- *Configuring E-Mail Notification Frequency*
- *Setting the Time of Day*
- *Sending E-mail Notifications in Response to Motion Events* on page 184
- *Sending E-mail Notifications in Response to Alarm Events* on page 184
- *Sending E-mail Notifications in Response to Video Loss Events* on page 185

Configuring E-Mail Notification Frequency

Depending on the volume of motion, alarm, or video loss events detected by the DX8100, the number of e-mail notifications can be far too many to manage effectively. To keep the number of e-mails sent by the DX8100 at a manageable level, the e-mail notification frequency can be adjusted. When events have been detected, e-mail notifications can be sent out in intervals from once per minute up to once every six hours. If no events have been detected during the specified frequency interval, no notification will be sent. Each e-mail notification will include information about the first event detected during the interval, the last event detected during the interval, and a still image (in JPEG format) of the last event.

To configure notification frequency:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Notification button . The Notification page is displayed.
3. Click the Emergency E-mail Notification Setup tab.

4. In the Frequency section, select the frequency interval from the drop-down box. Options for sending an e-mail notification include once every
   - 1 minute
   - 10 minutes
   - 30 minutes
   - 1 hour
   - 3 hours
   - 6 hours

Setting the Time of Day

To set the time of day during which e-mail notifications will be sent:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Notification button . The Notification page is displayed.
3. Click the Emergency E-mail Notification Setup tab.
4. In the Frequency section, do the following:
   a. Click the Start check box to use the spinner buttons, or type the earliest time of day you want e-mail notifications to be sent (for example, 7:30 a.m.).
   b. Click the End check box to use the spinner buttons, or type the latest time of day you want e-mail notifications to be sent (for example, 6:00 p.m.).
5. Click Apply.

Sending E-mail Notifications in Response to Motion Events

E-mail notifications can be sent whenever a camera attached to a DX8100 detects motion.

To cause e-mail notifications to be sent in response to motion events:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Notification button . The Notification page is displayed.
3. Click the Emergency E-mail Notification Setup tab.
4. In the Notification Items section, do the following:
   a. Click the Motion check box.
   b. In the Selected Channels field, click once to the right of the word Motion. The Selected Channels dialog box opens.
   c. Do one of the following:
      - Click the check box for each channel you want to monitor for motion detection events.
      - Click Select All to monitor all channels for motion detection.
      - Click Deselect All to deselect all channels.
5. Click OK.
6. Click Apply.

Sending E-mail Notifications in Response to Alarm Events

E-mail notifications can be sent whenever an alarm input is activated.

To initiate e-mail notifications to be sent in response activated alarm inputs:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Notification button . The Notification page is displayed.
3. Click the Emergency E-mail Notification Setup tab.

4. In the Notification Items section, do the following:
    a. Click the Alarm check box.
    b. In the Selected Channels field, click once to the right of the word Alarm. The Selected Channels dialog box opens.
    c. Do one of the following:
        - Click the check box for each channel you want to monitor for alarm detection events.
        - Click Select All to monitor all channels for alarm detection.
        - Click Deselect All to deselect all channels.
5. Click OK.
6. Click Apply.

Sending E-mail Notifications in Response to Video Loss Events

E-mail notifications can be sent whenever a camera attached to a DX8100 experiences a video loss event.

To cause e-mail notifications to be sent in response to video loss events:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Notification button . The Notification page is displayed.
3. Click the Emergency E-mail Notification Setup tab.
4. In the Notification Items section, do the following:
    a. Click the Video Loss check box.
    b. In the Selected Channels field, click once to the right of the words Video Loss. The Selected Channels dialog box opens.
    c. Do one of the following:
        - Click the check box for each channel you want to monitor for video loss detection events.
        - Click Select All to monitor all channels for video loss detection.
        - Click Deselect All to deselect all channels.
5. Click OK.
6. Click Apply.

SETTING UP E-MAIL NOTIFICATION GROUPS

The DX8100 allows you to set up groups to send an emergency notification to multiple users. The DX8100 supports the following:

- You can create up to 32 e-mail notification groups.
- Up to 32 members can be assigned to each e-mail group.
- A group can be notified in response to an alarm or motion detection event.

This section describes how to set up e-mail notification groups and includes the following topics:

- *Adding an E-mail Notification Group*
- *Modifying an E-mail Group Name*
- *Deleting an E-mail Group* on page 186
- *Adding Members to an E-mail Group* on page 187
- *Deleting Members from an E-mail Group* on page 188
- *Modifying E-mail Group Member Attributes* on page 189

Adding an E-mail Notification Group

To add an e-mail notification group:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Notification button . The Notification page is displayed.

3. Click the Emergency E-mail Notification Setup tab.
4. In the Mail Group area, do the following:
    a. Click Manage Groups. The Group Management dialog box opens.
    b. Click Add Group. The Manage Groups dialog box opens.
    c. Enter the name of the group. (Group names can be up to 32 characters in length and can include spaces, but not special characters.)
5. Click OK.
6. Click Close.
7. Click Apply.

Modifying an E-mail Group Name

To modify a group name:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Notification button . The Notification page is displayed.
3. Click the Emergency E-mail Notification Setup tab.
4. In the Mail Group area, do the following:
    a. Click Manage Groups. The Group Management dialog box opens.
    b. In the Group Name table, select a group.
    c. Click Edit Group. The Manage Groups dialog box opens.
    d. Edit the existing name or enter a new name for the group.
5. Click OK.
6. Click Close.
7. Click Apply.

Deleting an E-mail Group

To delete a group:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Notification button . The Notification page is displayed.
3. Click the Emergency E-mail Notification Setup tab.
4. In the Mail Group area, do the following:
    a. Click Manage Groups. The Group Management dialog box opens.
    b. In the Group Name table, select a group.
    c. Click Delete.
5. Click Close.
6. Click Apply.

Adding Members to an E-mail Group

Up to 32 members can be assigned to each e-mail group.

To add e-mail addresses to a group:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Notification button . The Notification page is displayed.
3. Click the Emergency E-mail Notification Setup tab.
4. Do the following:
   a. In the Mail Group section, select a group name from the drop-down box.
   b. Ensure that the group check boxes under To and CC are deselected.
   c. Enter an e-mail address in the To or CC boxes.
   d. Click Add to Group.
5. Click Apply.

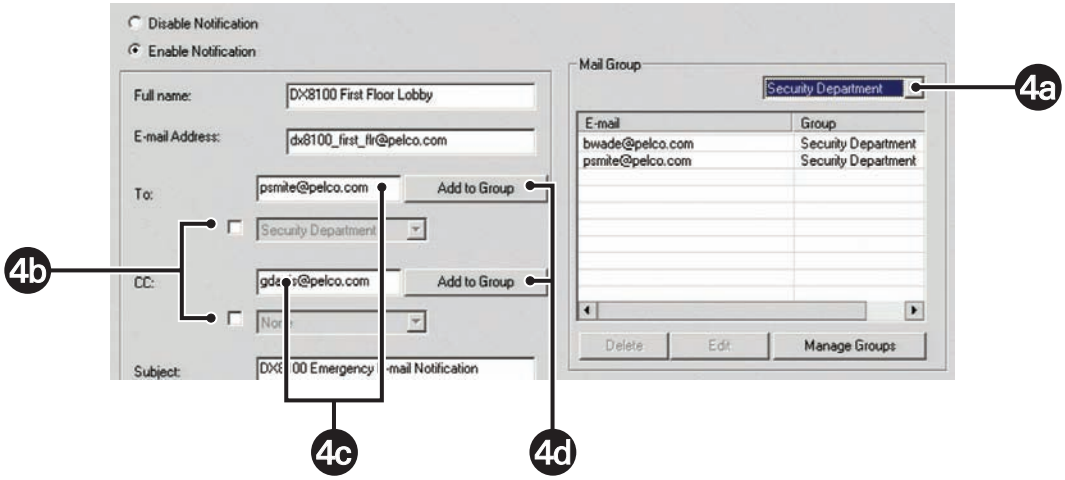

Figure 146. Add User to E-mail Group

Deleting Members from an E-mail Group

To delete a user from a group:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Notification button . The Notification page is displayed.
3. Click the Emergency E-mail Notification Setup tab.
4. Do the following:
   a. In the Mail Group section, select a group name from the drop-down box.
   b. Select the user you want to delete from the list.
   c. Click Delete.
5. Click Apply.

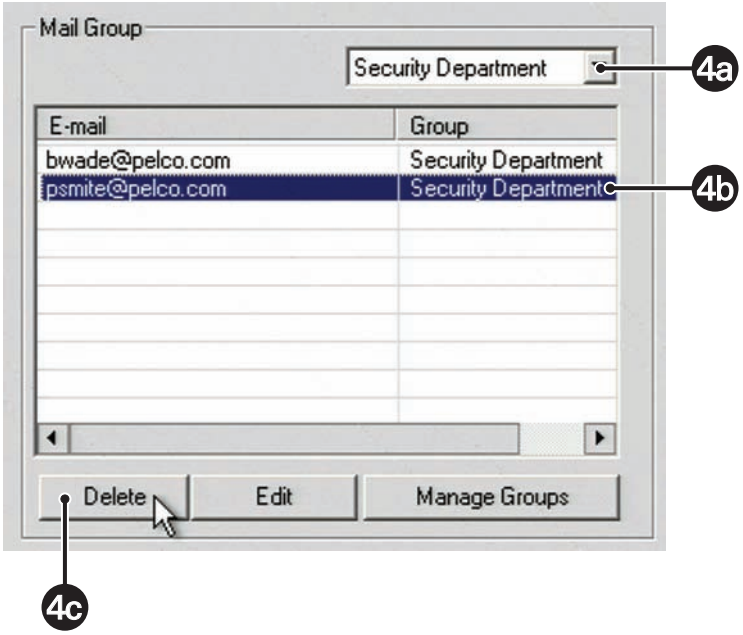

Figure 147. Remove User from E-mail Group

Modifying E-mail Group Member Attributes

To modify a user's e-mail address or group affiliation:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Notification button . The Notification page is displayed.
3. Click the Emergency E-mail Notification Setup tab.
4. Do the following:
   a. In the Mail Group section, select a group name from the drop-down box.
   b. Click the e-mail address of the user you want to edit.
   c. Click Edit. The E-mail Settings dialog box opens.
   d. In the Group drop-down box, select a different group for the user.
   e. If necessary, enter a new e-mail address for the user in the E-mail Address box.
5. Click OK.
6. Click Apply.

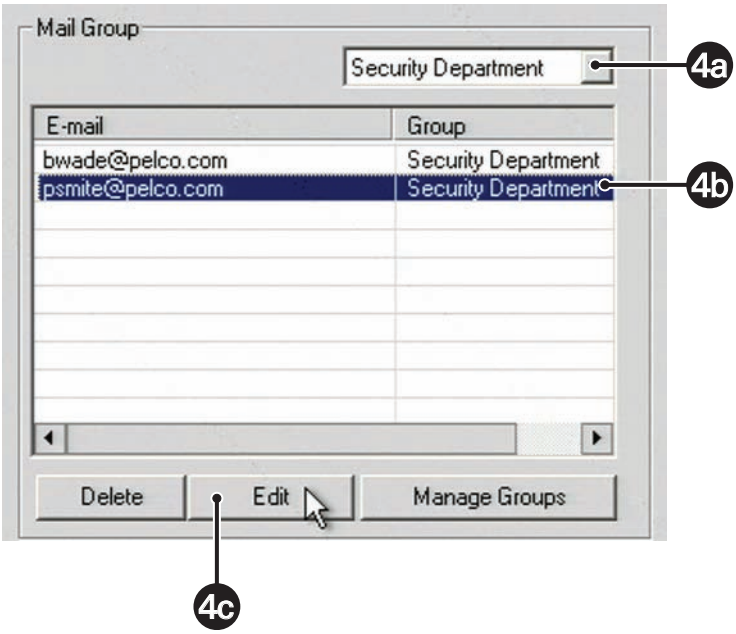

Figure 148. Modify Member Attributes

SENDING E-MAIL NOTIFICATIONS

This section describes how to send e-mail notifications and includes the following topics:

- *Sending E-mail Notifications to Individuals* on page 190
- *Sending E-mail Notifications to Groups* on page 191

Sending E-mail Notifications to Individuals

To configure e-mail notifications to send alerts to an individual:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Notification button . The Notification page is displayed.
3. Click the Emergency E-mail Notification Setup tab.
4. Do the following:
   a. In the To box, enter the e-mail address of the individual to whom you would like to send e-mail notifications.
   b. (Optional) In the CC box, enter a second e-mail address of a person to whom you would like to send a copy of the notification.
   c. In the Subject box, enter text in the subject line as you would like it to appear in e-mail notifications. (The default subject line is DX8100 Emergency E-mail Notification.)
5. Click Apply.

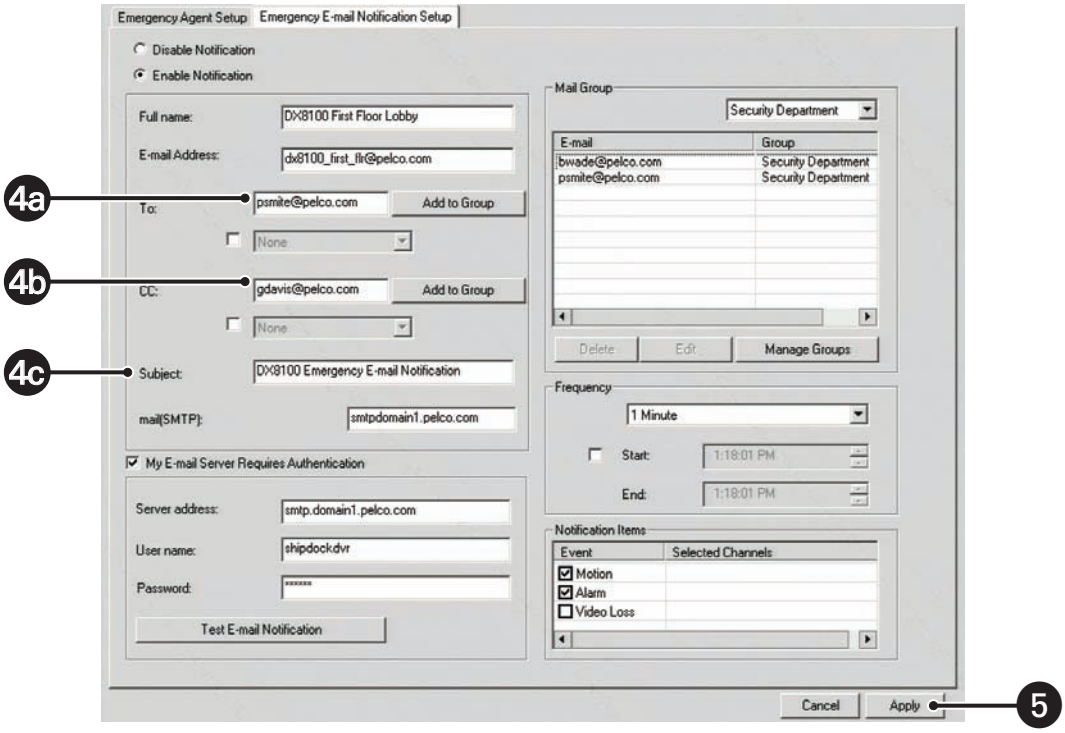

Figure 149. Sending E-mails to Individuals

Sending E-mail Notifications to Groups

To configure e-mail notification to send e-mail alerts to a group of individuals:

1. On the DX8100 toolbar, click the Setup button . The Setup dialog box opens to the Camera page.
2. Click the Notification button . The Notification page is displayed.
3. Click the Emergency E-mail Notification Setup tab.
4. Do the following:
   a. Click the To check box.
   b. In the drop-down box, select the group to which you want to send event notifications.
   c. (Optional) If you want to e-mail a copy of the event notification to another group of users, click the CC: check box.
   d. In the drop-down box, select the group you want to copy.
5. Click Apply.

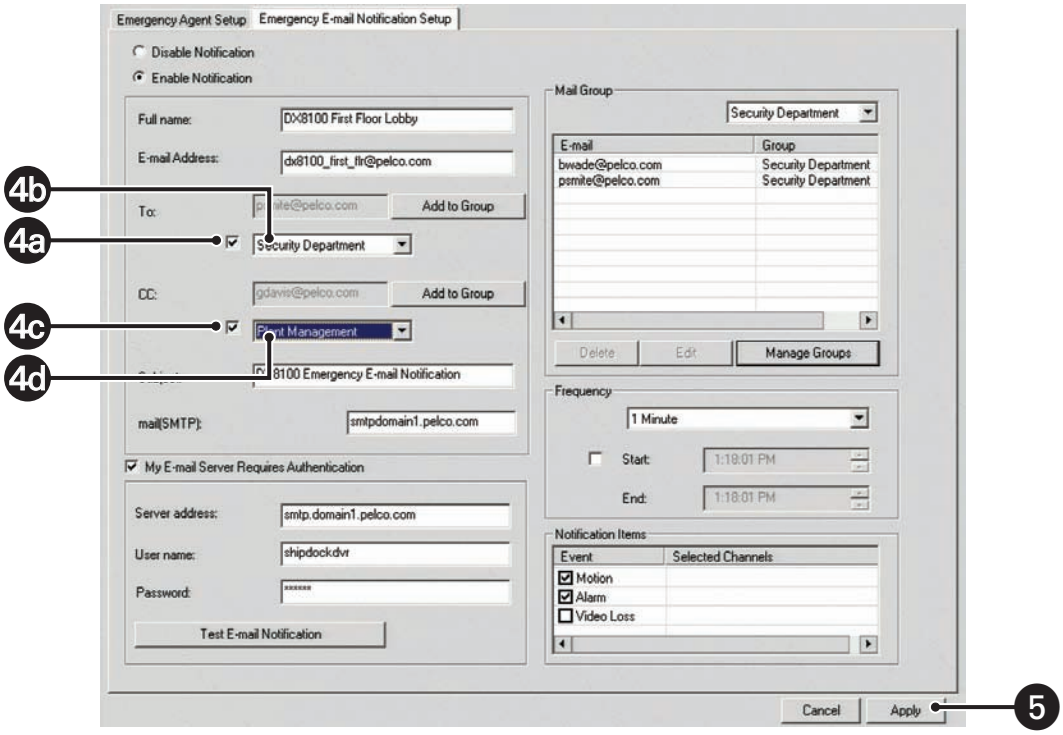

Figure 150. Sending E-mails to Groups

DX8100 Client Emergency Agent

Welcome to the DX8100 Client Emergency Agent application. The DX8100 Client Emergency Agent works with network HVRs to alert users when one or more particular channels detect a motion, alarm, or video loss event. The Emergency Agent runs on a network client computer.

This section describes how to install, set up, and use the DX8100 Client Emergency Agent and includes the following topics:

- *Setting Up and Using the Client Emergency Agent*
- *Recommended System Requirements*
- *Installing the Client Emergency Agent Application* on page 192
- *Enabling IPSec Security Services* on page 193
- *Disabling IPSec Security Services* on page 193

Setting Up and Using the Client Emergency Agent

The following steps must be completed in sequence before the Emergency Agent can receive event notifications:

1. You must install the Client Emergency Agent software on your client computer before you can use it. Refer to the installation manual for instructions on installing the Client Emergency Agent utility.
2. The DX8100 server must be turned on and operating.
3. Both the DX8100 server and client must be connected to the same network.
4. The Emergency Agent Notification system must be operating on the DX8100 server.
5. The client computer must be listed in the emergency agent notification list of the DX8100 server, and at least one camera must be linked to the client. For more information, refer to *Emergency Notification Setup* on page 178.
6. The Client Emergency Agent must be configured and activated on the client computer.

RECOMMENDED SYSTEM REQUIREMENTS

The following minimum system requirements are needed to operate the DX8100 Emergency Agent:

- Processor: Intel Pentium III, or Pentium 4 with 800 MHz minimum processor speed
- Memory: 128 MB of RAM
- Video: AGP VGA card with minimum of 64 MB of video RAM, 1024 x 768 display resolution, 32-bit color, and DirectX 8.1 or later hardware acceleration
- 2.5 MB of free disk space for the full application and additional space to store images
- Monitor: SVGA or XGA with 1024 x 768 resolution, 32-bit color
- Operating system: Windows 2000 (SP4) or Windows XP only

INSTALLING THE CLIENT EMERGENCY AGENT APPLICATION

To install the Client Emergency Agent application:

1. Start the Windows operating system.
2. Close all programs, including any antivirus software.
3. Insert the DX8100 Resource CD into the DVD drive of your computer and wait for the DX8100 Resource CD screen to appear.
4. Click Software. The Software menu is displayed.
5. Click DX8100 Viewer. The DX8100 Emergency Agent Setup dialog box appears.
6. Click Next. The Software License Agreement dialog box appears.
7. Read the license agreement, and then select the “I accept this License Agreement” check box.
8. Click Next. The Select Installation Folder dialog box appears.

9. Click Next to accept the default installation folder. The Emergency Agent software is installed.
10. Click Finish to complete the installation process.

ENABLING IPSEC SECURITY SERVICES

In order to communicate with a network DX8100 Series HVR, IPSec security must be enabled on your computer. To see the Manage IPSec Settings menu option from the Start menu, the Start menu has to be changed to Classic View.

To enable IPSec security services:

1. Do one of the following:
   - Verify that the Start menu is in Classic View.
   - Set the Start menu to Classic View.
2. Go to Start > Manage IPSec Settings. The DX8100 IPSec Policy dialog box opens.
3. Select the Enable DX8100 IPSec Policy check box (if it is not already selected).
4. (If applicable) Set the Start menu to its previous view.

DISABLING IPSEC SECURITY SERVICES

To disable IPSec security services:

1. Do one of the following:
   - Verify that the Start menu is in Classic View.
   - Set the Start menu to Classic View.
2. Go to Start > Manage IPSec Settings. The DX8100 IPSec Policy dialog box opens.
3. Deselect the Enable DX8100 IPSec Policy check box.
4. (If applicable) Set the Start menu to its previous view.

   NOTE: Disabling IPSec security services will prevent your computer from communicating with DX8100 servers. Consult your system administrator before disabling IPSec security.

Before You Begin

Ensure that the following requirements have been met before starting the Emergency Agent application:

1. Make sure there is at least one active DX8100 Series HVR available on your network and your computer is set up to access it. Consult your network administrator for more information.
2. Install the DX8100 Emergency Agent application on your computer, if you have not done so already. Refer to *Installing the Client Emergency Agent Application* on page 192 for instructions.
3. Make sure that Emergency Agent notification is set up on one or more DX8100 Series HVRs, and that your computer has been selected to receive emergency notifications. For information about setting up Emergency Agent notification, refer to the *Emergency Notification Setup* section of the Operation/Configuration manual.
4. Make sure IPSec security services are installed and enabled on your computer. For more information, refer to *Installing the Client Emergency Agent Application* on page 192 and *Enabling IPSec Security Services* on page 193.

STARTING THE CLIENT EMERGENCY AGENT

To start the emergency agent software on a client computer:

1. Turn on your computer and wait while Windows loads.
2. Double-click the Emergency Agent icon on the client computer's desktop.

   The Emergency Agent dialog box opens.

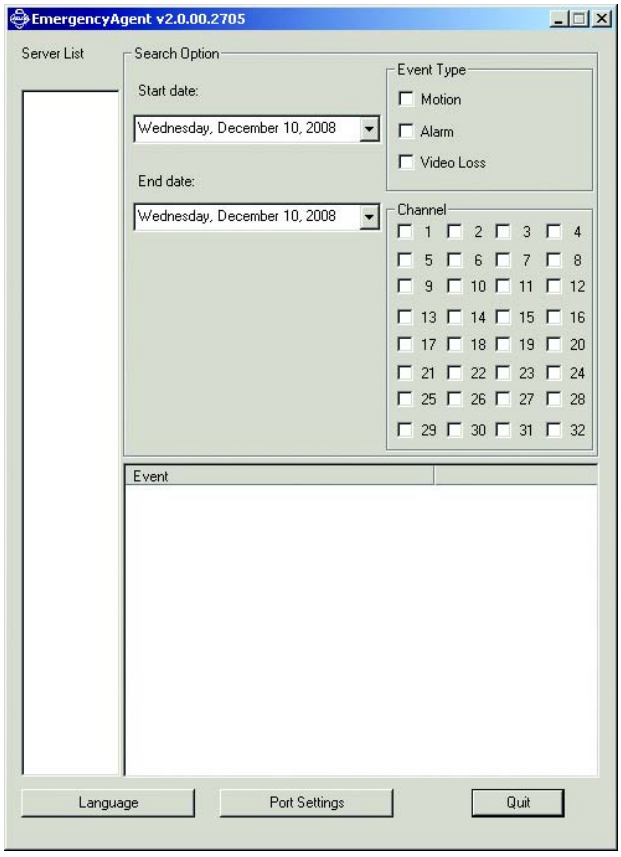

Figure 151. Client Emergency Agent Dialog Box

REAL-TIME EVENT MONITORING

Once the Client Emergency Agent has been activated, a motion or alarm event detected by a linked camera on a DX8100 server will cause a pop-up window to display a still image of the event. In addition to real-time monitoring of events, all event notifications sent to the client will be logged for future viewing.

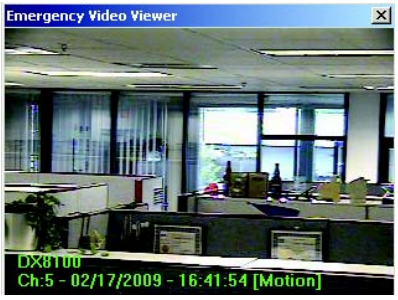

Figure 152. Client Emergency Agent Pop-up Window

SETTING THE CLIENT EMERGENCY AGENT LISTEN PORT

If necessary, you can change the network port used by the Client Emergency Agent.

To change the port:

1. Click the Port Setting button. The Emergency Agent Listen Port dialog box opens.
2. If necessary enter a new port number (default port number is 9004).

   NOTE: The port number must be an integer between 5000 and 6535. You should keep the default port setting unless there is a conflict on your network. Consult your network administrator before changing network port settings.
3. Click OK.

VIEWING PREVIOUSLY LOGGED EVENTS

Over time, the Client Emergency Agent will accumulate event information in a list. This list can be searched, and still images of previously logged events can be viewed.

To view previously logged events:

1. Select a DX8100 Series HVR from the Server list.
2. Select a start date to mark the first date to begin searching logged events.

   Setting the start time earlier than the first time you began using the Client Emergency Agent will result in no events appearing in the list.
3. Select an end date to mark the last date to search for logged events.
4. Select the type of event (motion, alarm, or video) to search.
5. Select one or more cameras.

6. Double-click each event in the event list you want to view. A pop-up window containing a still image of the logged event will open.

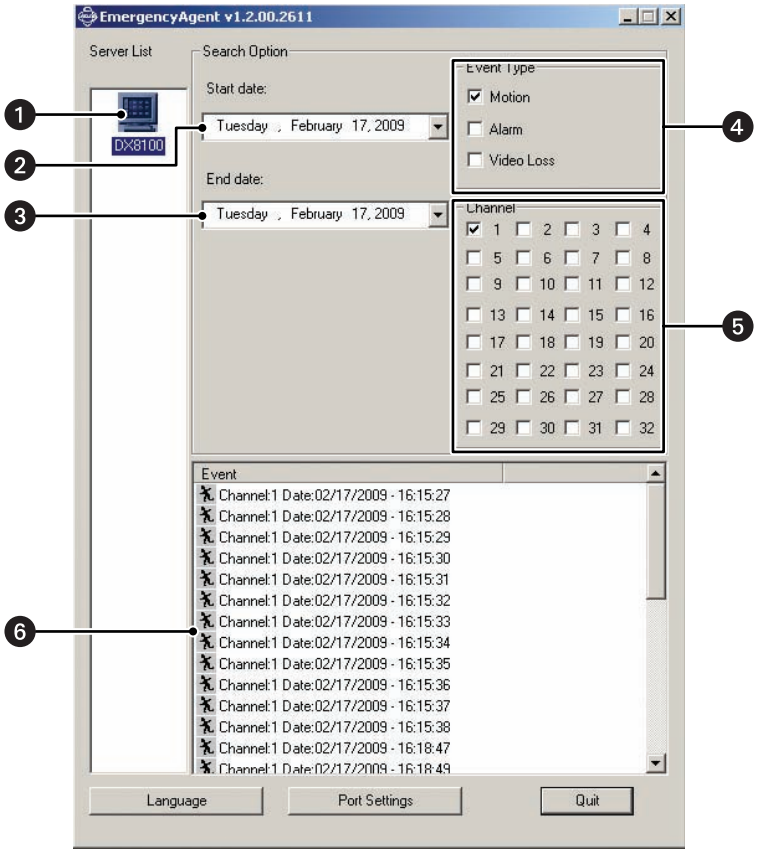

Figure 153. Client Emergency Agent Server List and Log

SHUTTING DOWN THE CLIENT EMERGENCY AGENT

To shut down the Client Emergency Agent:

- Click Quit.

DX8100 Viewer

Welcome to the DX8100 Viewer application. The DX8100 Viewer is capable of playing back a variety of video, still image, and audio media formats. It is designed to recognize and verify the digital watermark that is embedded in DX8100 native video. Watermarking is used to authenticate the originality of a video file and to alert users of possible image tampering. The viewer application runs automatically each time a CD or DVD created by the DX8100's export feature is inserted into a Windows-based computer. The software can also be installed on a computer and opened independently when necessary.

This section describes how to install, set up, and use the DX8100 Client Viewer, and includes the following topics:

- *Setting Up and Using the DX8100 Viewer*
- *Working with the Playlist*
- *Working with Viewer Configuration Tools*
- *Exiting the DX8100 Viewer Application*

Setting Up and Using the DX8100 Viewer

This section describes how to use the DX8100 Viewer application and includes the following topics:

- *Recommended System Requirements*
- *DX8100 Viewer Software Installation*
- *Starting the DX8100 Viewer*
- *Viewing Media files*
- *Playing Video*
- *Saving Snapshots*
- *Printing Images*
- *Working with the Playlist*

RECOMMENDED SYSTEM REQUIREMENTS

The following minimum system requirements are needed to operate the DX8100 Viewer software:

- Processor: Intel Pentium III, or Pentium 4 with 800 MHz minimum processor speed
- Memory: 128 MB of RAM
- Video: AGP VGA card with minimum of 64 MB of video RAM, 1024 x 768 display resolution, 32-bit color, and DirectX 8.1 or later hardware acceleration
- 4.5 MB of free disk space
- Monitor: SVGA or XGA with 1024 x 768 resolution, 32-bit color
- Operating system: Windows XP only

DX8100 VIEWER SOFTWARE INSTALLATION

To install the DX8100 Viewer software:

1. Start the Windows operating system.
2. Close all programs, including any antivirus software.
3. Insert the DX8100 Resource CD into the CD-ROM drive of your computer and wait for the DX8100 Resource CD screen to appear.
4. Click Software. The Software menu is displayed.
5. Click DX8100 Viewer. The DX8100 Viewer Setup dialog box opens.
6. Click Next. The Software License Agreement dialog box opens.
7. Click Next.
8. Click Next to accept the default installation folder.
9. Click Finish to complete the installation process.

STARTING THE DX8100 VIEWER

The Playback speed cannot be changed in the DX8100 Viewer. After opening up a saved file, the program will not allow you to move the slider to speed up or slow down the video.

To start the DX8100 Viewer software on a client computer:

1. Turn on the client computer and wait while Windows loads.
2. Double-click the DX8100 Viewer icon on the client computer's desktop.

The DX8100 Viewer application window opens.

Figure 154. DX8100 Viewer Main Screen

Table AQ describes the parts of the DX8100 Viewer window.

Table AQ. Parts of the DX8100 Mobile Client Window

Item	Part
❶	Toolbar
❷	View panel
❸	Play speed control for video captured in the DX8100 Native format.
❹	Watermark verification message area
❺	Volume controls (click speaker icon to toggle audio mute)
❻	Playback slider
❼	Playback controls

Table AR describes the DX8100 Viewer toolbar buttons.

Table AR. DX8100 Viewer Toolbar Buttons

Button	Name	Description
	Folder	Browse drives and open media files.
	Save	Save a snapshot of the current screen image.
	Print	Print the current screen image.
	Playlist	Expand window to reveal playlist.
	Configuration	Expand the window to reveal configuration tools.
	Watermark	Verify a valid watermark is embedded.

VIEWING MEDIA FILES

To open a file for viewing:

1. On the DX8100 Viewer toolbar, click . The Open dialog box appears.

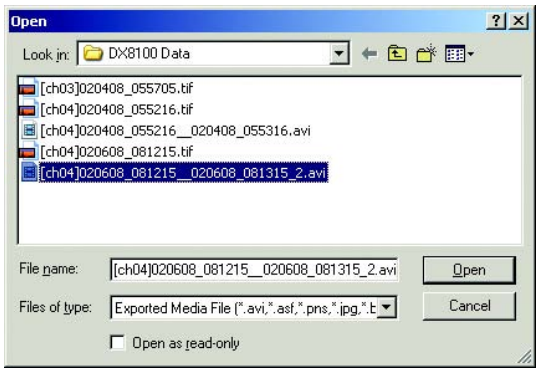

Figure 155. Open Dialog Box

2. Click the "Look in" drop-down box to select the drive and folder location where the media file(s) resides.
3. Select the file(s) you want to play.
4. Click Open. The file opens in the DX8100 Viewer window in the Play mode.

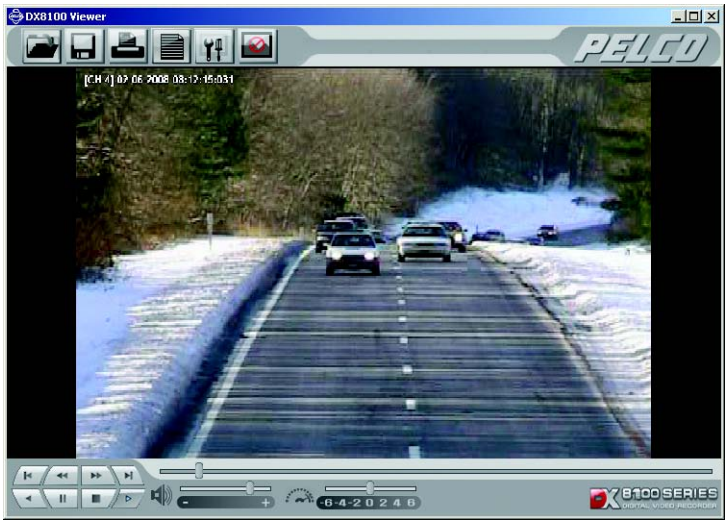

Figure 156. View Panel Image

PLAYING VIDEO

You can play video files in the DX8100 Viewer after they have been opened. The DX8100 Viewer provides a speed control that allows you to speed up playback of video exported in the Native format. The maximum playback speed is x6 the regular speed.

To begin playback of a an exported DX8100 video file:

1. On the DX8100 Viewer toolbar, click the Play list button .
2. Use the playback controls and playback slider to move through a video file.
3. Do the following:
   a. Use the audio controls to increase, decrease, or mute playback volume.
   b. Use the speed control to increase or decrease the playback of video exported in the Native format.

SAVING SNAPSHOTS

You can take snapshots of still images that appear in the view panel. Use the playback controls to pause a video file on a specific still image. Snapshots are stored in a folder for later retrieval or viewing. For information about changing the location of the snapshot folder, refer to *Working with Viewer Configuration Tools*.

To save a snapshot of a still image appearing, click the Save button on the DX8100 Viewer toolbar.

PRINTING IMAGES

You can print still images that appear in the view panel. Use the playback controls to pause a video file on a specific still image.

To print a still image, click the Print button on the DX8100 Viewer toolbar.

Working with the Playlist

The DX8100 viewer application allows you to create, load, and save a playlist of media files. This section describes how to work with the playlist and includes the following topics:

- *Accessing the Playlist*
- *Adding Files to the Current List*
- *Removing Media Files from the Current List*
- *Playing a File from the Playlist*
- *Loading a Previously Saved Playlist*
- *Saving the Current Playlist*

ACCESSING THE PLAYLIST

To access the playlist:

- On the DX8100 Viewer toolbar, click Playlist.

For example, click the Playlist button . Figure 157 shows the playlist.

Figure 157. Viewer Playlist

ADDING FILES TO THE CURRENT LIST

To add media files to the current list:

1. In the Playlist dialog box, click the Add button [+].The Open dialog box opens.

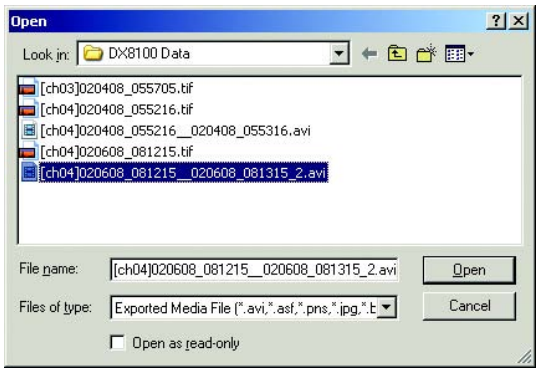

Figure 158. Adding Files to a Play List

2. Click the "Look in" drop-down box to select the drive and folder location where the media file(s) resides.
3. Select the file(s) you want to play.

   Use the Ctrl key to simultaneously select multiple files to add to the playlist.
4. Click Open.

REMOVING MEDIA FILES FROM THE CURRENT LIST

To remove media files from the current list:

1. In the Playlist dialog box, select a file from the list.
2. Click the Delete button [–] to remove the file.

PLAYING A FILE FROM THE PLAYLIST

If there are multiple files in the playlist, each file will play in the order in which they in the list.

To play a file from the playlist,

- In the Playlist dialog box, double-click the file name.

LOADING A PREVIOUSLY SAVED PLAYLIST

To load a previously saved playlist:

1. In the Playlist dialog box, click the Load button [Load].
2. Select a saved playlist file.

SAVING THE CURRENT PLAYLIST

Depending on the amount of data stored and the type of media used, it may take several minutes to load a playlist.

To save the current playlist to disk,

- In the Playlist dialog box, click the Save button [Save].

Working with Viewer Configuration Tools

This section describes how to use the DX8100 Viewer configuration tools and includes the following topics:

- *Accessing Viewer Configuration Tools*
- *Adjusting Picture Quality*
- *Changing the Snapshot Directory*
- *Changing the Language*
- *Enabling/Disabling Filtered Image Display*

ACCESSING VIEWER CONFIGURATION TOOLS

To access the Viewer Setup dialog box:

- On the DX8100 Viewer toolbar, click Configuration.

  The Configuration Tools dialog box is displayed in the Viewer window pane.

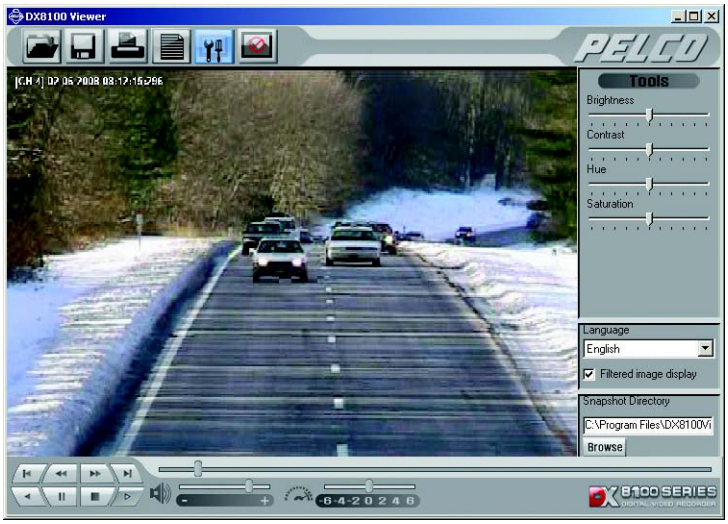

Figure 159. Viewer Configuration Tools

ADJUSTING PICTURE QUALITY

The DX8100 Viewer Configuration Tools dialog box provides the following controls to adjust picture quality:

- Brightness
- Contrast
- Hue
- Saturation

To adjust the picture quality in the view panel:

- In the Configuration Tools dialog box, use the sliders to adjust the picture.

CHANGING THE SNAPSHOT DIRECTORY

To change the default directory where snapshots are stored:

- In the Configuration Tools dialog box, click the Browse button [Browse] and navigate to a directory.

CHANGING THE LANGUAGE

To change the language:

1. On the DX8100 Viewer toolbar, click Tools. The menu is displayed.
2. In the Language section, select a language.
3. Close the DX8100 Viewer application.
4. Restart the DX8100 Viewer application.

ENABLING/DISABLING FILTERED IMAGE DISPLAY

To enable/disable filtered image display:

1. On the DX8100 Viewer toolbar, click Tools. The menu is displayed.
2. Do one of the following:
   - To enable filtered image display, click the check box in the Language section to select the Filtered Image display box.
   - To disable filtered image display, click the check box in the Language section to deselect the Filtered Image display box.

VERIFYING THE WATERMARK

Watermarking is used to authenticate the originality of a video file and to alert users of possible image tampering.

To verify the watermark:

1. Open an exported video image.
2. On the DX8100 Viewer toolbar, click the Watermark button . The Watermark Viewer dialog box opens.
3. Click Watermark Check. The DX8100 Viewer performs a check to verify if the watermark is authentic, and then displays the result and video image in the Watermark Viewer dialog box.

EXITING THE DX8100 VIEWER APPLICATION

To exit the DX8100 viewer application:

- Click the Close button ☒ in the top-right corner of the viewer window.

DX8100 Mobile Client

Welcome to the DX8100 Mobile Client application. The DX8100 Mobile Client allows you to view live video remotely from multiple cameras and sites. Networking capabilities include local connection using wire-bound or wireless LAN technologies or remote connection using the Internet. The DX8100 Mobile Client software runs on a standard pocket PC-based PDA, and it can display a single channel of real-time video from any camera attached to any DX8100 HVR on the network. Features include hierarchical organization of multiple sites, built-in security through password protection, and an adjustable viewing area, with full-screen view.

Setting Up and Using the DX8100 Mobile Client

This section describes how to install, set up, and use the DX8100 Mobile Client. The following topics are included:

- *Recommended System Requirements*
- *Mobile (PDA) Client Software Installation*
- *Connecting Mobile Clients to a DX8100 Series HVR*
- *Starting the DX8100 Mobile Client*
- *Exiting the DX8100 Mobile Client*
- *Setting Up User Security*
- *Logging in to the Mobile Client application*
- *Working with Sites and Groups*
- *Connecting to a DX8100 Site*
- *Disconnecting From a Server Site*
- *Viewing Live Video*
- *Customizing the View Screen*

RECOMMENDED SYSTEM REQUIREMENTS

The following minimum system requirements are needed to operate the DX8100 Mobile Client PDA:

- PDA Hardware: A pocket PC-compatible handheld device.
- Processor: Intel XScale® compatible with a minimum processor speed of 400 MHz
- Memory: 64 MB of RAM
- Video: TFT liquid crystal display with minimum 240 x 320 display resolution, 64K colors
- Operating System: Microsoft pocket PC 2002 or later
- Computer with Windows operating system and Microsoft ActiveSync® version 3.5 or later installed
- Wired or wireless networking capability

MOBILE (PDA) CLIENT SOFTWARE INSTALLATION

To install the DX8100 Mobile Client:

1. Install ActiveSync on your Windows computer (if it is not already installed).
2. Connect the hand held device to your computer.
3. Turn on your handheld device (if it is not already running).
4. Insert the DX8100 Resource CD into your computer's DVD drive and wait for the DX8100 Resource CD screen to appear.
5. Click Software. The Software menu is displayed.
6. Click Mobile Client. The Mobile Client Setup dialog box opens.
7. Click Next. The Software License Agreement dialog box opens.
8. Click Next. The Installing Application dialog box opens.
9. Click Yes to accept the default installation folder.
10. Wait while ActiveSync copies the DX8100 Mobile Client program files to your handheld device, and then click OK in the Application Downloading Complete dialog box.

CONNECTING MOBILE CLIENTS TO A DX8100 SERIES HVR

Using a wired or wireless network connection, the DX8100 Mobile Client application can monitor live video from a number of geographically dispersed HVRs. Figure 160 shows a simplified wireless network connecting a pocket PC-compatible PDA device to a single DX8100 HVR.

Detailed instructions, describing how to configure your particular PDA device for wireless networking, are beyond the scope of this manual. Consult your network administrator and the documentation that came with your device for instructions on connecting your PDA to a network.

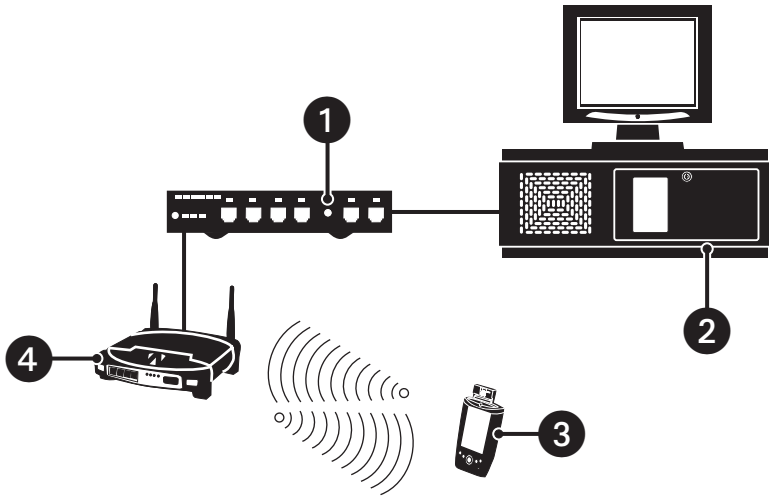

Figure 160. PDA-to-HVR Wireless Networking Example

Table AS describes the components of a DX8100 Mobile Client network.

Table AS. Components of a DX8100 Mobile Client Network

Item	Component
1	Ethernet switch
2	DX8100 server HVR
3	Mobile client
4	Wireless access point

When using wireless networking to connect a mobile device to the DX8100, Pelco recommends using enterprise class access points, transceivers, and switches. Wired networking infrastructure should comply with IEEE 802.3 Fast Ethernet standards. Wireless networking infrastructure should comply with IEEE 802.11a, b, or g networking standards.

STARTING THE DX8100 MOBILE CLIENT

Before attempting to start the DX8100 Mobile Client application, make sure you have installed the Mobile Client software on your pocket PC-compatible handheld device and you have an active network connection to a DX8100 HVR server.

To start the DX8100 Mobile Client application:

- From the Windows Start menu, choose Start > Programs > DX8100.

  The DX8100 Mobile Client application starts.

Figure 161 shows the DX8100 Mobile Client application window.

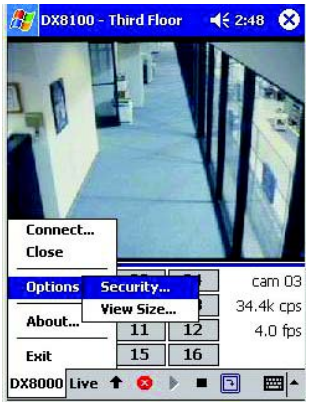

Figure 161. Example: Main Screen_C2630M-C-0051

Table AT describes the parts of the DX8100 Mobile Client window.

Table AT. Parts of the DX8100 Mobile Client Window

Item	Part	Item	Part
❶	View window	❼	Live menu
❷	Camera selection buttons	❽	Connect
❸	Currently viewed camera	❾	Disconnect
❹	Data rate	❿	Resume live view
❺	Mobile Client frame rate	⓫	Pause live view
❻	DX8100 menu	⓬	Switch to full-screen view

EXITING THE DX8100 MOBILE CLIENT

To exit the DX8100 Mobile Client application:

1. On the DX8100 Mobile Client toolbar, tap DX8100.
2. Tap Exit.

   You can also Tap the Exit button icon on the title bar to exit.

SETTING UP USER SECURITY

This section describes how to set up security and includes the following topics:

- *Setting Up an Initial Password*
- *Changing an Existing Password*

SETTING UP AN INITIAL PASSWORD

To set up an initial password:

1. Tap DX8100 > Options > Security.

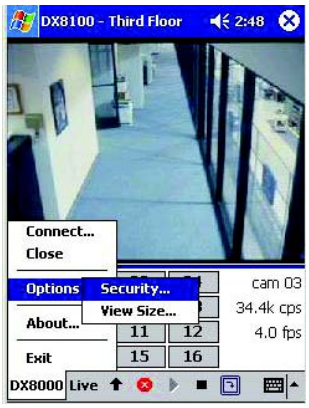

Figure 162. DX8100 Menu Security Option

2. Leave the Current box blank.
3. Enter a password in the New box. (Passwords must be 4-10 characters long and can include spaces and special characters.)
4. Re-enter the new password in the Confirm box.
5. Tap OK.

CHANGING AN EXISTING PASSWORD

To change an existing password:

1. Tap DX8100 > Options > Security.

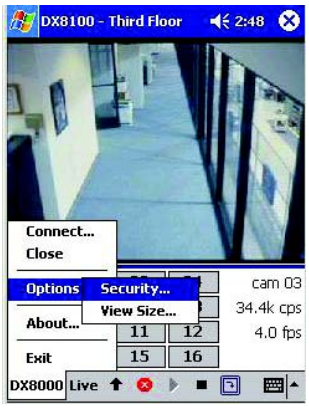

Figure 163. Security Menu Option

2. Enter your password in the Current box.
3. Enter a different password in the New box. (Passwords must be 4-10 characters long and can include spaces and special characters.)
4. Re-enter the new password in the Confirm box.
5. Tap OK.

LOGGING IN TO THE MOBILE CLIENT APPLICATION

After the security password has been assigned, you must log in to the Mobile Client application each time it is launched.

To log in to the Mobile Client application, enter a password in the field provided and then click OK.

WORKING WITH SITES AND GROUPS

This section describes how to work with sites and groups and includes the following topics:

- *Creating Site Groups*
- *Editing an Existing Group*
- *Deleting a Group*
- *Adding a DX8100 Site to a Group*
- *Editing a DX8100 Site*
- *Deleting a DX8100 Site*

CREATING SITE GROUPS

To create site groups:

1. Tap ⬆ on the toolbar to take you directly to the Connect screen.

   You can also tap DX8100 > Connect to go to the Connect screen.

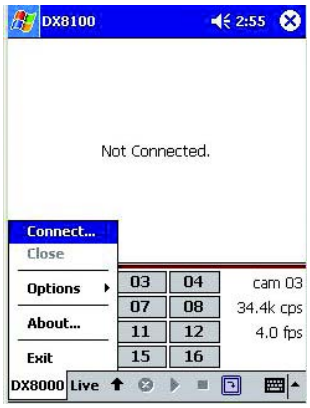

Figure 164. Connect Menu Option

2. Tap Add.

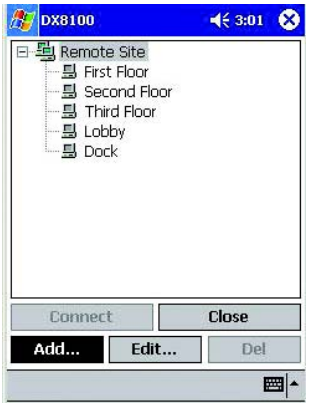

Figure 165. Connect Screen

3. Tap New Group.

Figure 166. Creating a New Group

4. Enter a name for the new group. (Group names can be a maximum of 15 characters long and can include spaces and special characters.)
5. Tap OK.

Figure 167. Entering a Name

6. Tap Cancel to return to the Connect screen.

Figure 168. Finalizing New Group Creation

EDITING AN EXISTING GROUP

To edit an existing group:

1. Tap ↑.
2. Select the group you want to edit.
3. Tap Edit.

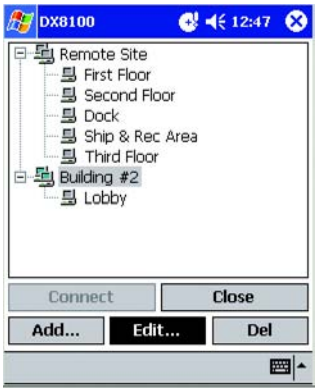

Figure 169. Editing a Group

4. Enter a new group name.
5. Tap OK.

Figure 170. Editing Group Information

6. Tap Close to return to the main screen.

DELETING A GROUP

To delete a group:

1. Tap the ⬆ icon on the toolbar.
2. Select the group you want to delete.

   You cannot delete the Remote Site group.
3. Tap Del.

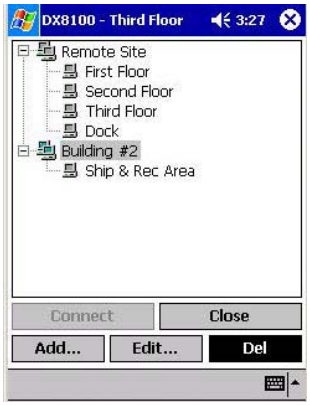

Figure 171. Deleting a Group

4. Select an option to either delete or retain sites within the group to be deleted.
   - Select "MOVED into default group" to move any sites to the Remote Site group.
   - Select DELETED to delete the group and any sites contained within it.
5. Tap OK to complete the deletion process for the group.

Figure 172. Finalizing Group Deletion

6. Tap Close to return to the main screen.

ADDING A DX8100 SITE TO A GROUP

To add a DX8100 site to a group:

1. Tap ⬆.
2. Tap Add.

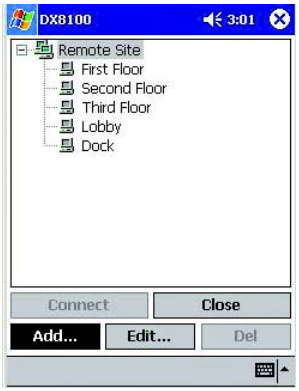

Figure 173. Adding a New DX8100 Site

3. Select a Group from the drop-down box.

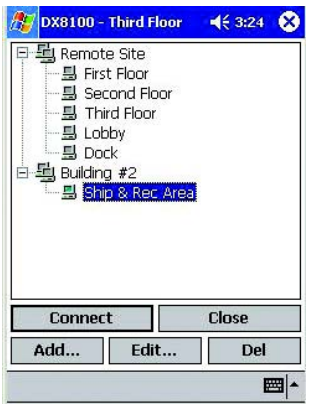

Figure 174. Site Setup Screen

4. Enter a name for the new DX8100 site. (Site names can be a maximum of 15 characters; spaces and special characters are allowed.)
5. Enter the IP address of the new site.
6. If necessary enter a new base port number (9002 is the default).

   Consult your network administrator before assigning or changing port numbers. Make sure that the ports are not blocked internally, but are protected from external threats by a firewall. Mobile client and server ports must be identical.

7. Tap OK.

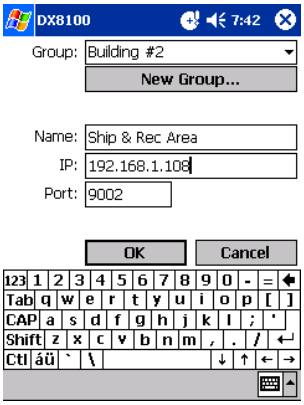

Figure 175. Entering New Site Information

8. Tap Connect to connect to the newly created site, or tap Close to go back to the main screen.

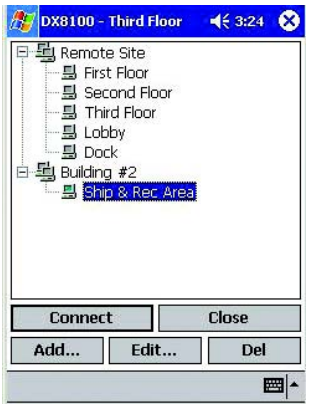

Figure 176. New Site in Connect Window

EDITING A DX8100 SITE

To edit a DX8100 site:

1. Tap the ⬆ icon on the toolbar.
2. If necessary, tap the plus (+) sign next to the group name to expand it.
3. Select the DX8100 HVR you want to edit.
4. Tap Edit.

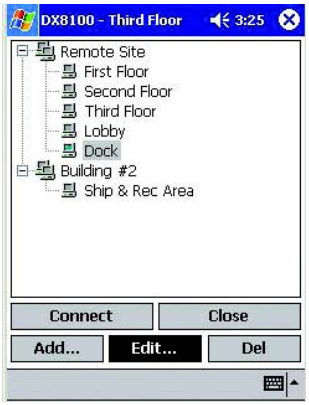

Figure 177. Selecting a Site to Edit

5. Enter a new name for the site.
6. Enter a new IP address for the site.
7. If necessary enter a new base port number (9002 is the default).

   Consult your network administrator before assigning or changing port numbers. Make sure that the ports are not blocked internally, but are protected from external threats by a firewall. Web client and server ports must be identical.
8. Tap OK.

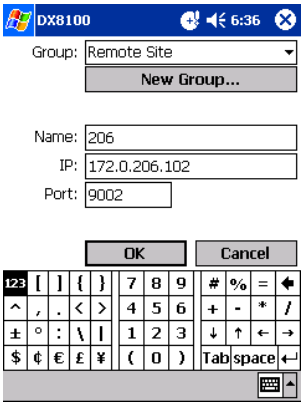

Figure 178. Changing a Site's Name and IP Address

9. Tap Close to return to the main screen.

DELETING A DX8100 SITE

To delete a DX8100 site:

1. Tap the ⬆ icon on the toolbar.
2. If necessary, tap the plus (+) sign next to the group name to expand it.
3. Select the DX8100 HVR Site you want to delete.
4. Tap Del.

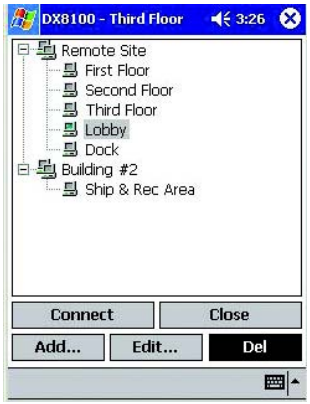

Figure 179. Deleting a Site

5. Tap Close to return to the main screen.

CONNECTING TO A DX8100 SITE

To connect to a DX8100 site:

1. Tap the ⬆ icon on the toolbar.
2. If necessary, tap the plus (+) sign next to the group name to expand it.
3. Select the DX8100 HVR you want to connect to.
4. Tap Connect to connect to the remote site and return to the main screen.

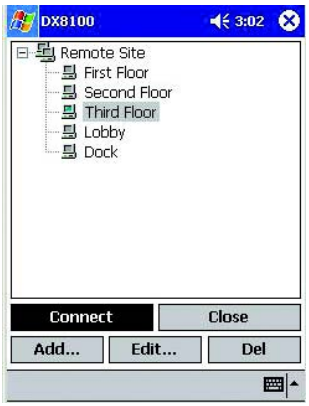

Figure 180. Connecting to an HVR Site

DISCONNECTING FROM A SERVER SITE

To disconnect from a server site:

1. Tap DX8100 on the toolbar.
2. Tap Close.

   Also, tapping the icon on the title bar will disconnect the site.

VIEWING LIVE VIDEO

To view live video:

Once you have connected to a DX8100 site, the main screen displays a live image of the connected site from Camera 1. *Figure 181* illustrates live view from the main screen.

1. Tap one of the camera selection buttons to view live video from a different camera.
2. Tap the to pause the image.
3. Tap the to resume live view.

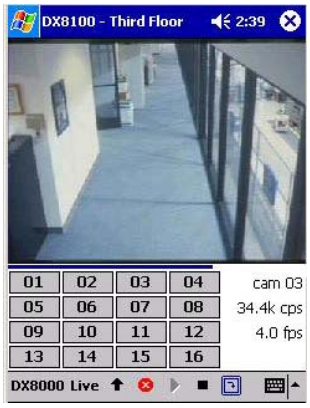

Figure 181. Viewing Live Video from the Main Screen

You can pause an image and resume live view by choosing menu commands. Tap Live > Stop to pause and Live > Start to resume live viewing.

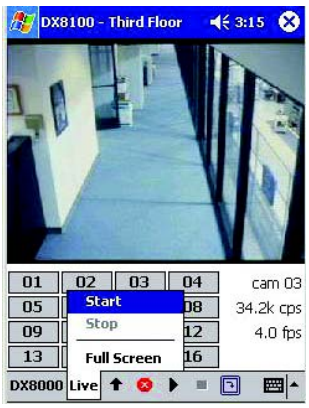

Figure 182. Live Menu with Start and Stop Options

CUSTOMIZING THE VIEW SCREEN

This section describes how to customize the view screen and includes the following topics:

- *Changing Screen Size*
- *Full-Screen Mode*

CHANGING SCREEN SIZE

To change the size of the main screen viewing area:

1. Tap DX8100 > Options > View Size.

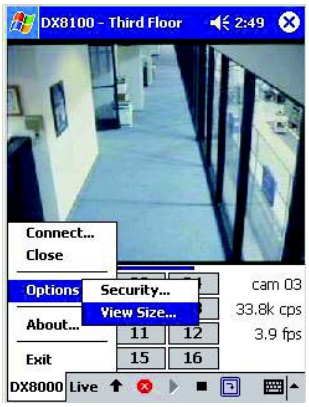

Figure 183. DX8100 Menu and View Size Option

2. Deselect the Auto Fit check box.
3. Move the slider to the desired position. (Screen size ranges from 120 x 90 to 240 x 180 pixels).
4. Tap OK.

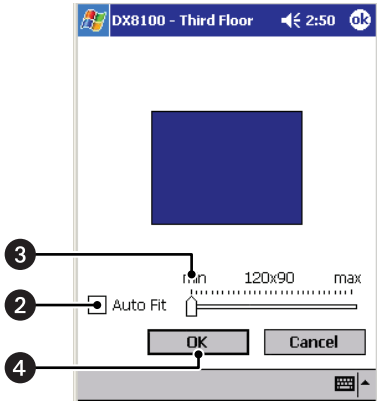

Figure 184. Minimum Screen Size

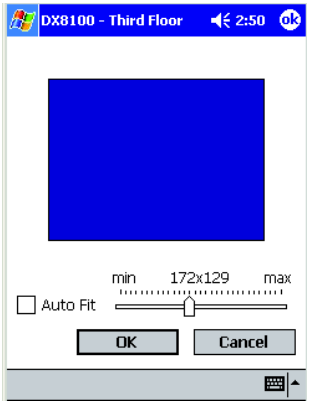

Figure 185. Medium Screen Size

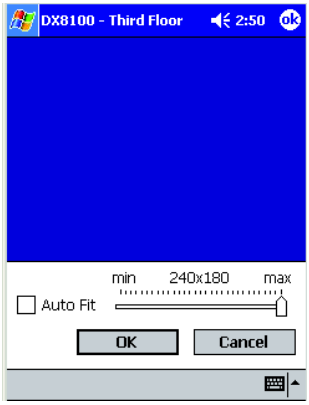

Figure 186. Maximum Screen Size

FULL-SCREEN MODE

To change to full-screen view:

1. Tap .

Figure 187. Full-Screen View

2. Tap anywhere on the screen to exit full-screen view.

   You can also tap Live > Full Screen to change to full-screen view.

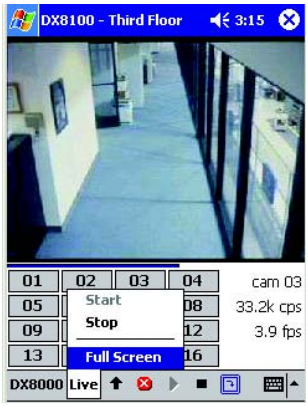

Figure 188. Live Menu and Full-Screen Option

DX8100 Web Client

Welcome to the DX8100 Web Client application. This section describes how to use the DX8100 Web Client application and includes the following topics:

- *Using the DX8100 Web Client*
- *Web Client Configuration* on page 226
- *Viewing Live Video* on page 234

Using the DX8100 Web Client

DESCRIPTION

The DX8100 Web Client allows you to view live video and operate the PTZ features of cameras attached to DX8100 Series HVRs. Using a standard Web browser, you can remotely monitor up to 16 cameras for up to 16 DX8100 servers simultaneously.

Using the multicast feature, the DX8100 HVR can support an unlimited number of Web Client connections, allowing you to view only live video. In this case, the PTZ functionality is not available. For information about enabling the DX8100 HVR multicast feature, refer to the DX8100 Operation/Programming manual.

Features:

- Live viewing of up to 16 cameras simultaneously
- Ability to monitor cameras from multiple DX8100 sites
- Multiple screen division options including single, quad, and sixteen panel views
- Full PTZ control (not available if using the multicast feature)
- Runs on multiple platforms using a standard Web browser

RECOMMENDED SYSTEM REQUIREMENTS

The following minimum system requirements are needed to operate the DX8100 Web Client:

- Processor: Intel Pentium III, or Pentium 4 with 800 MHz minimum processor speed
- Memory: 128 MB of RAM
- Video: AGP VGA card with minimum of 64 MB of video RAM, 1024 x 768 display resolution, 32-bit color, and DirectX 8.1 or later hardware acceleration
- 4.5 MB of free disk space
- Monitor: SVGA or XGA with 1024 x 768 resolution, 32-bit color
- Operating system: Windows XP only

NOTE: The DX8100 Web Client is only compatible with Internet Explorer®.

INSTALLATION

The first time you use a Web browser to connect to an HVR server, an ActiveX® control application is downloaded and installed on your local computer. This control facilitates usage of the Web client's interactive features.

1. To install and enable IPSec security services, refer to either *Installing the Client Application* on page 17 or *Installing the Client Emergency Agent Application* on page 192. Refer to *Enabling IPSec Services* on page 17 for instructions on how to enable IPSec security services.

   You must install either the computer Client application or the Client Emergency Agent application to install IPSec security services.

2. Start Microsoft Internet Explorer.

   NOTE: The DX8100 Web Client is only compatible with Internet Explorer.

3. Enter the IP address of one of the DX8100 servers to which you want to connect. An information bar is displayed.

4. Click the information bar. A short-cut menu is displayed.

5. Click Run ActiveX Control.

6. Click Run. The Web HVR application window appears and the information bar is displayed.
7. Click the information bar. A short-cut menu is displayed.
8. Click Run ActiveX Control. The Web HVR application window is displayed.

STARTING THE DX8100 WEB CLIENT

Your Web browser must have cookies enabled. Refer to Microsoft Internet Explorer Help for instructions on enabling cookies. User names and passwords are case sensitive, type them exactly as shown.

NOTES: To avoid potential problems and conflicts within your computer's video subsystem, run only one instance of the Client application or Web Client at a time. You must have IPSec security services enabled to use the DX8100 Web Client.

To activate the DX8100 Web Client application:

1. Start Microsoft Internet Explorer.
2. Enter the IP address of one of the DX8100 servers to which you want to connect. The Digital Video Recorder dialog box opens.

Figure 189. Entering a DX8100 Server User Name and Password

3. Enter a DX8100 server user name.
4. Enter the DX8100 server password.
5. Click Log In. The DX8100 Web Client screen appears.

EXITING THE DX8100 WEB CLIENT

To exit the Web Client application, select File > Close from the browser window.

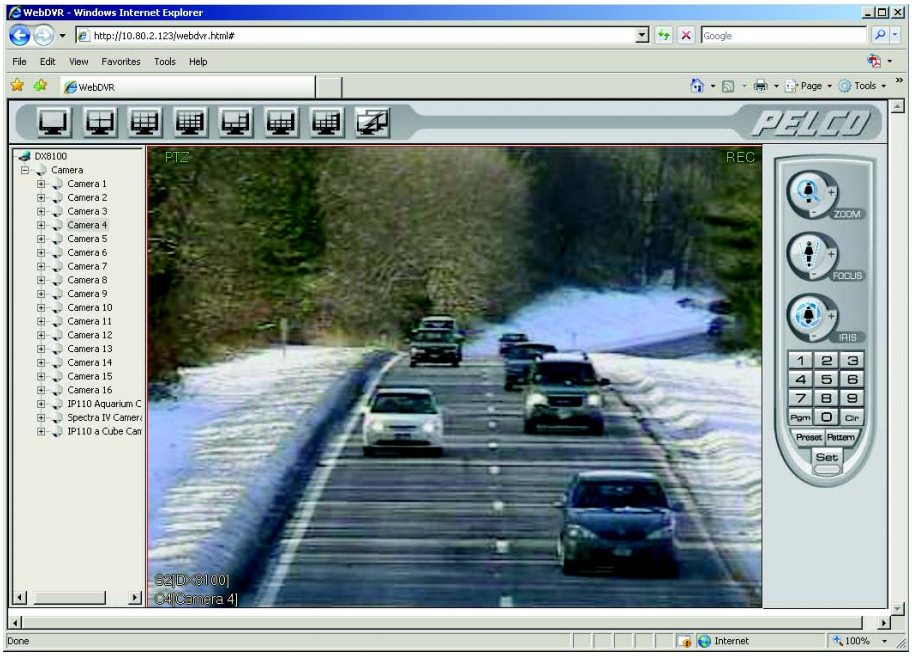

Figure 190. Web Browser File Menu

SCREEN LAYOUT

Cameras can be assigned to view panels, live video can be displayed, and PTZ features can be controlled from a single screen. Figure 191 shows the available features of the DX8100 Web Client application.

Figure 191. Web Client Screen Layout

Table AU describes the Web Client application window.

Table AU. Web Client Application Window Parts

Item	Description
❶	Site Tree
❷	Screen division buttons
❸	Remote site connection button
❹	PTZ zoom control
❺	PTZ focus control
❻	PTZ iris control
❼	PTZ keypad
❽	View pane or view panel

Web Client Configuration

WORKING WITH THE CONNECTION LIST

Before live video can be viewed from the Web Client's view panels, at least one connection to a remote DX8100 server must be established. Up to one hundred DX8100 server sites can be added to the Connection List. Using the multicast feature, the DX8100 HVR can support an unlimited number of Web client connections. For information about enabling the DX8100 HVR multicast feature, refer to the DX8100 Operation/ Programming manual.

This section describes how to work with the connection list and includes the following topics:

ADDING SITES TO THE CONNECTION LIST

This section describes how to add a site to the connection list using a known or unknown IP address. The following topics are included:

- *Adding a DX8100 Site with a Known IP Address*
- *Adding a DX8100 Site with a Unknown IP Address* on page 227

Adding a DX8100 Site with a Known IP Address

To add a site to the Connection List when you know the site's IP address:

1. Click the Connection List button . The Connection List dialog box opens.

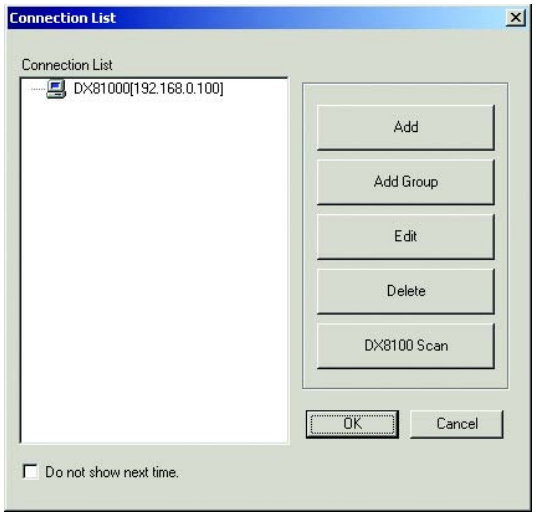

Figure 192. Connection List Dialog Box

2. Click Add. The Server Information dialog box appears.

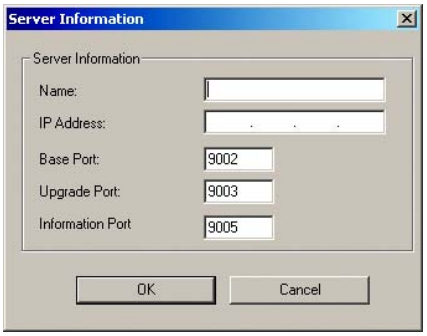

Figure 193. Server Information Dialog Box

3. Enter the name of the DX8100 Series HVR to which you want to connect.
4. Enter the IP address of the HVR.

5. If necessary enter a new base port number (9002 is the default).

   Consult your network administrator before assigning or changing port numbers. Make sure that the ports are not blocked internally, but are protected from external threats by a firewall. Web client and server ports must be identical.

6. If necessary, enter a software upgrade port number (9003 is the default).

7. If necessary, enter a new information port in the Information Port box (9005 is the default).

8. Click OK. The site appears in the Connection List.

Adding a DX8100 Site with a Unknown IP Address

To add a remote HVR site to the Connection List when you do not know the IP address:

NOTES: To be successful, the following stipulations must be satisfied:

- Each HVR must be attached to the same subnet.
- The first three octets of the IP address of the subnet must be known.
- The range of addresses used in the last octet of the subnet must be known.

1. Click the Connection List button . The Connection List dialog box opens.

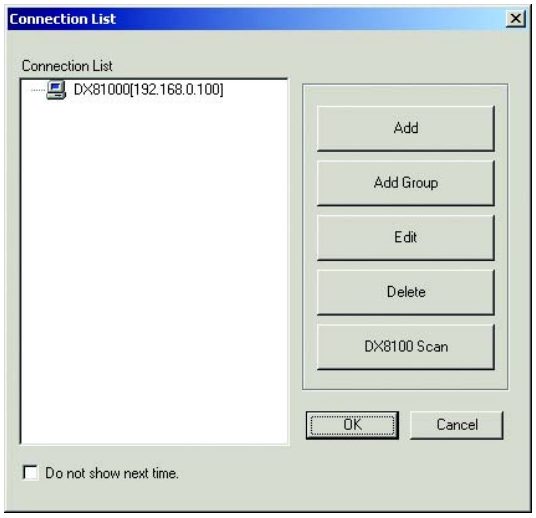

Figure 194. Connection List Dialog Box

2. Click DX8100 Scan. The DX8100 Scan dialog box appears.

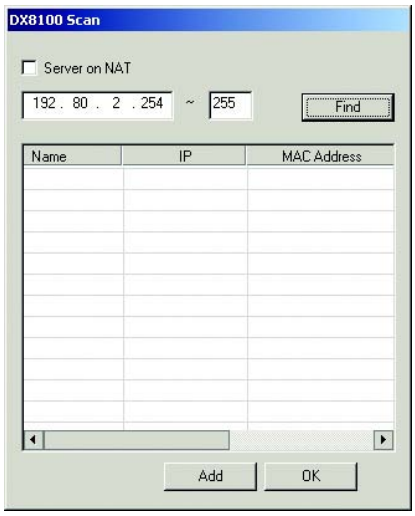

Figure 195. DX8100 Scan Dialog Box

3. If your server is on Network Address Translation (NAT), click the Server on NAT check box.
4. Enter an IP address range to search for HVR sites.
   a. Enter the first three octets of the IP range you want to search, for example 192.80.2.
   b. Enter the beginning value for the search range in the fourth octet, for example 001.
   c. Enter the final value for the search range in the box provided, for example 254.

   NOTE: Each octet of the IP address must be an integer from 1-255.
5. Click Find.
6. Select one or more DX8100 servers to add to the Site Tree.
7. Click Add. The site appears in the Connection List.
8. Click OK to return to the Connection List dialog box.

GROUPING DX8100 SERVERS IN THE CONNECTION LIST

The DX8100 Web Client allows you to group DX8100 servers in the connection list. This section describes how to group DX8100 servers in the connection list, and add a DX8100 server with a known/unknown IP address to a group. The following topics are included:

- *Adding a Group to the Connection List*
- *Adding a DX8100 Server to a Group with a Known IP Address* on page 229
- *Adding a DX8100 Server to a Group with an Unknown IP Address* on page 230

Adding a Group to the Connection List

To add a group to the connection list:

1. Click the Connection List button . The Connection List dialog box opens.

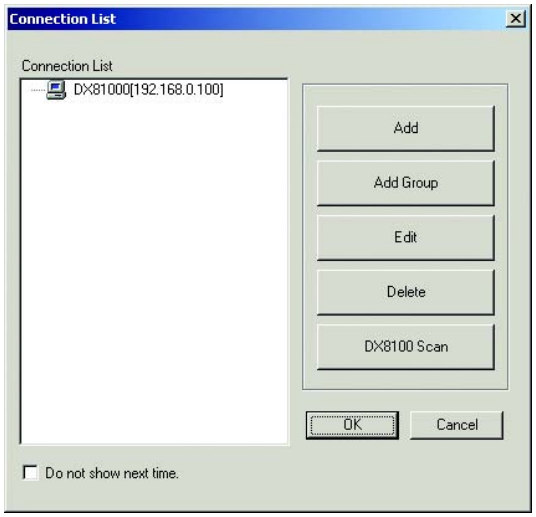

Figure 196. Connection List Dialog Box

2. Click Add Group. The Add Group dialog box appears.
3. Enter the name of the group you want to create.
4. Click OK. The group name is added to the connection list.

Adding a DX8100 Server to a Group with a Known IP Address

To add a DX8100 server to a group with a known IP address:

1. Click the Connection List button . The Connection List dialog box opens.

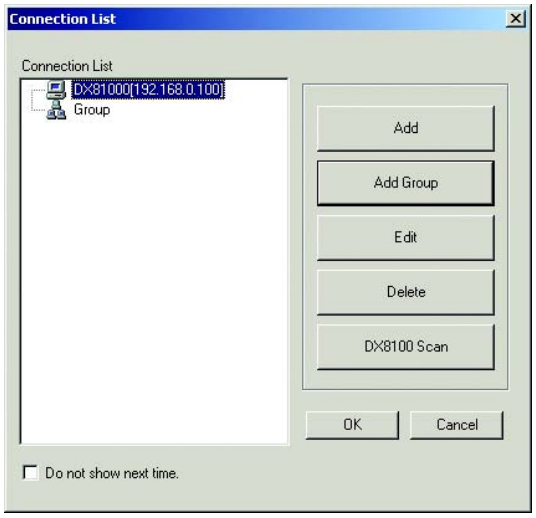

Figure 197. Connection List Dialog Box

2. Do the following:
   a. Select a group.
   b. Click Add. The Server Information dialog box opens.

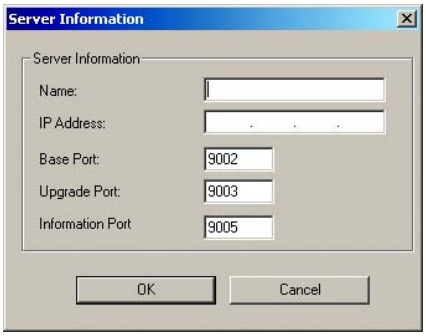

Figure 198. Server Information Dialog Box

3. Enter the name of the DX8100 Series HVR you want to add to the group.
4. Enter the IP address of the HVR.
5. If necessary enter a new base port number (9002 is the default).

   Consult your network administrator before assigning or changing port numbers. Make sure that the ports are not blocked internally, but are protected from external threats by a firewall. Web client and server ports must be identical.
6. If necessary, enter a software upgrade port number (9003 is the default).
7. If necessary, enter a new information port in the Information Port box,(9005 is the default).
8. Click OK. The site appears in the Connection List under the group name.

Adding a DX8100 Server to a Group with an Unknown IP Address

To add a remote HVR site to a group in the Connection List when you do not know the IP address:

NOTES: To be successful, the following stipulations must be satisfied:

- Each HVR must be attached to the same subnet.
- The first three octets of the IP address of the subnet must be known.
- The range of addresses used in the last octet of the subnet must be known.

1. Click the Connection List button . The Connection List dialog box opens.

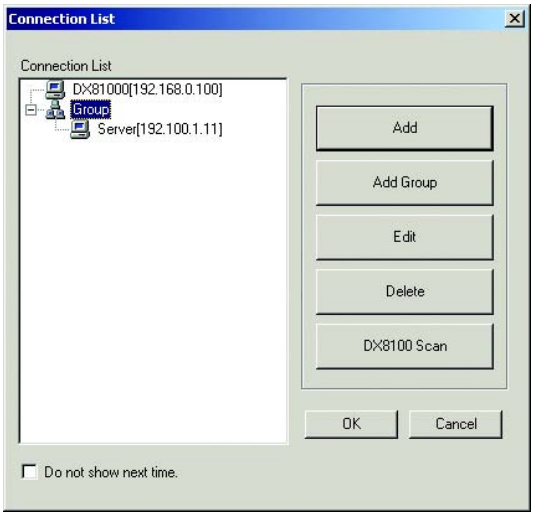

Figure 199. Connection List Dialog Box

2. Do the following:
   a. Select a group.
   b. Click DX8100 Scan. The DX8100 Scan dialog box opens.

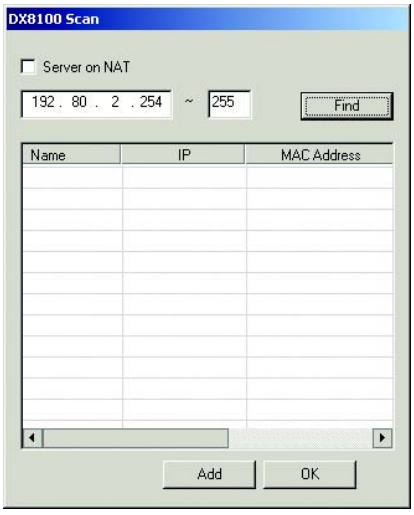

Figure 200. DX8100 Scan Dialog Box

3. If your server is on Network Address Translation (NAT), click the Server on NAT check box.
4. Enter an IP address range to search for HVR sites.
   a. Enter the first three octets of the IP range you want to search, for example 10.10.1.
   b. Enter the beginning value for the search range in the fourth octet, for example 001.
   c. Enter the final value for the search range in the box provided, for example 254.

   NOTE: Each octet of the IP address must be an integer from 1-255.
5. Click Find.
6. Select one or more DX8100 servers to add to the Site Tree.
7. Click Add. The site appears under the group name in the Connection List.
8. Click OK to return to the Connection List dialog box.

MODIFYING A CONNECTION LIST

This section describes how to modify the connection list and includes the following topics:

- *Deleting a DX8100 HVR Server from the Connection List*
- *Editing a DX8100 Server's Information in the Connection list* on page 232

Deleting a DX8100 HVR Server from the Connection List

1. Click the Connection List button . The Connection List dialog box opens.

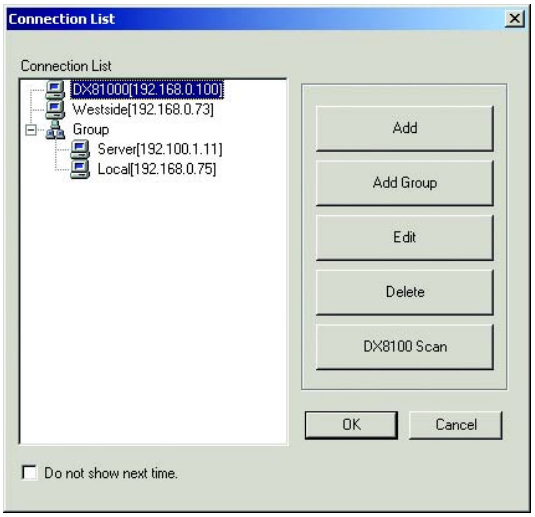

Figure 201. Deleting a Site from the Connection List

2. Select the DX8100 Series HVR you want to delete.
3. Click Delete. The site is removed from the Connection List.
4. Click OK.

Editing a DX8100 Server's Information in the Connection list

1. Click the Connection List button . The Connection List dialog box opens.

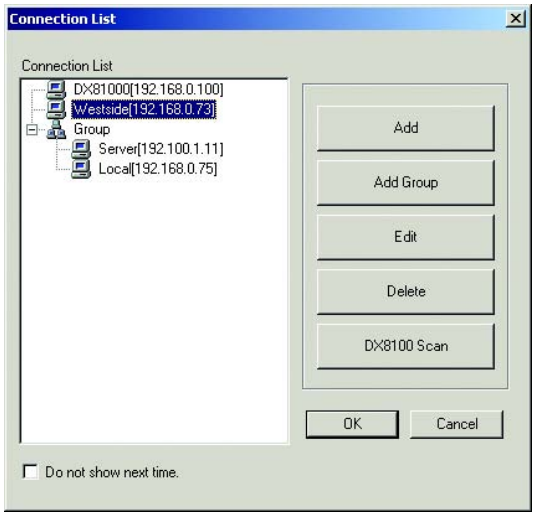

Figure 202. Editing a Site from the Connection List

2. Select the DX8100 Series HVR you want to edit.
3. Click Edit. The Server Information dialog box appears.

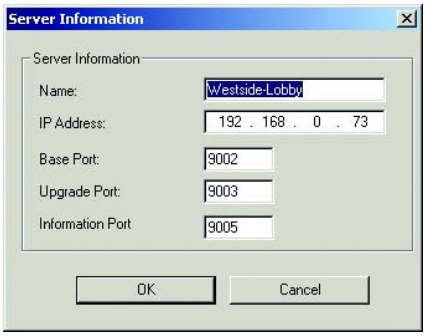

Figure 203. Editing Server Information

4. Enter a new name for the server.
5. Enter a new IP address for the server.
6. If necessary enter a new base port number (9002 is the default).

   Consult your network administrator before assigning or changing port numbers. Make sure that the ports are not blocked internally, but are protected from external threats by a firewall. Web client and server ports must be identical.
7. If necessary enter a software upgrade port number (9003 is the default).
8. If necessary enter the information port number (9005 is the default).
9. Click OK. The site appears in the Connection List.
10. Click OK to return to the Connection List dialog box.

WORKING WITH REMOTE SITES

This section describes how to work with remote sites and includes the following topics:

- *Connecting to a Remote Site*
- *Logging In to a Remote Site*
- *Logging Out of a Remote Site* on page 233
- *Disconnecting from a Remote Site* on page 234

CONNECTING TO A REMOTE SITE

To connect to an active DX8100 server on the network:

1. Right-click the remote site name from the Site Tree.
2. Select Connect from the shortcut menu.

Figure 204. Remote Site Connection Shortcut Menu

LOGGING IN TO A REMOTE SITE

After a connection to a remote site has been established, you must log in with a valid user name and password for that site.

To log in to a remote site:

1. Select a remote DX8100 Series HVR site from the Site Tree.

Figure 205. Selecting a Site

2. Right-click the site name and then select User Log-in from the shortcut menu.
3. Enter a user name and password for the remote site.

LOGGING OUT OF A REMOTE SITE

To log out of a remote HVR site, right-click the site name from the Site Tree, and then select User Log-Out from the shortcut menu.

DISCONNECTING FROM A REMOTE SITE

To terminate a connection with a remote DX8100 server:

1. Right-click the name of the remote site from the Site Tree.
2. Select Disconnect from the shortcut menu.

Figure 206. Shortcut Menu Disconnect Option

VIEWING LIVE VIDEO

The DX8100 Web Client allows you to view live video from up to 16 cameras, by dragging one or more cameras from the Site Tree onto the view panels. For information about selecting cameras for viewing video, refer to *Assigning Cameras to View Panes* on page 43 for instructions.

This section describes how to use the Web Client to view live video, and includes the following topics:

- *Configuring View Panels*
- *Assigning Cameras to View Panels* on page 235
- *Operating the On-Screen PTZ Controls* on page 235

CONFIGURING VIEW PANELS

The DX8100 Web Client can display up to 16 cameras simultaneously, on a single screen.

To establish the arrangement of view panels on the Web Client screen, select a screen division button from the toolbar. Table AU describes the division buttons.

Table AV. Web Client Division Buttons

Button	Description
	Displays 1 camera.
	Displays 4 cameras simultaneously (quad display).
	Displays 9 cameras simultaneously.
	Displays 16 cameras simultaneously.
	6-panel display. Divides screen into 1 large and 5 small view panels.
	10-panel display. Divides screen into 2 large and 8 small view panels.
	13-panel display. Divides screen into 1 large and 12 small view panels.

ASSIGNING CAMERAS TO VIEW PANELS

The DX8100 Web Client includes up to 16 view panels. Each view panel can display a single camera channel from any connected server.

To assign a camera to a view panel:

1. Click the plus sign (+) beside Camera for the site you want to view. This expands the Site Tree.
2. Drag a camera from the Site Tree onto a view panel.

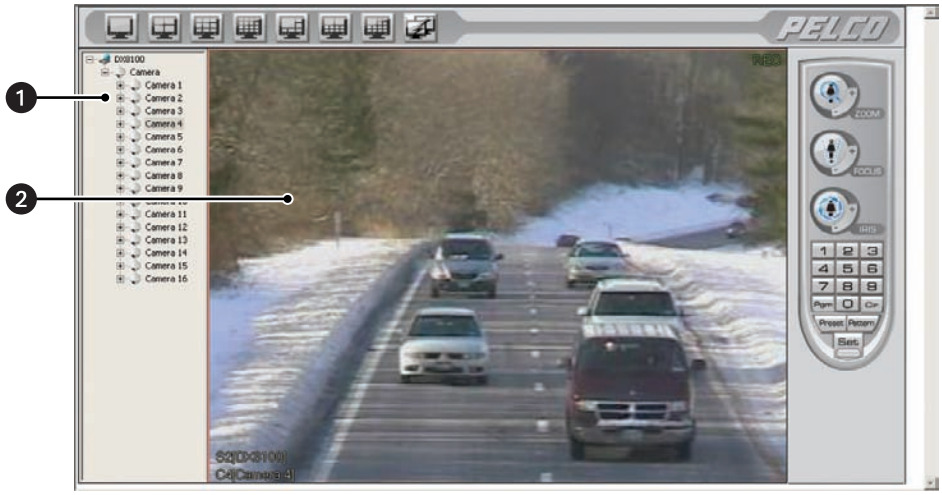

Figure 207. Dragging a Camera to a Web Client View Panel

3. Repeat the process in steps 1-2 for up to 16 cameras from various HVR sites.

   When changing from one screen division to another you must reassign cameras to view panels.

OPERATING THE ON-SCREEN PTZ CONTROLS

The on-screen PTZ control allows users to manipulate the positioning and lens features of cameras using a mouse. This section describes how to use the PTZ controls and includes the following topics:

- *Operating PTZ Controls* on page 235
- *PTZ Presets* on page 236
- *Programming a Preset* on page 237
- *Activating a Preset* on page 238
- *Clearing a Preset* on page 239

Operating PTZ Controls

To operate the on-screen PTZ controls:

1. Place the mouse pointer in the middle of a camera view panel.
2. Click the left mouse button, and then drag the mouse pointer in the direction you want to move the camera. Figure 208 illustrates the range of motion possibilities for the on-screen PTZ control.

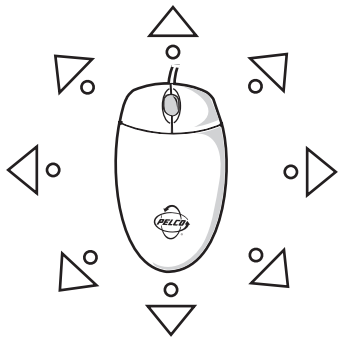

Figure 208. On-Screen PTZ Movement

3. Release the mouse button when you have moved the camera to the desired position.
4. To adjust camera lens features, click the plus (+) or minus (-) buttons next to each function on the keypad. Refer to Figure 209.

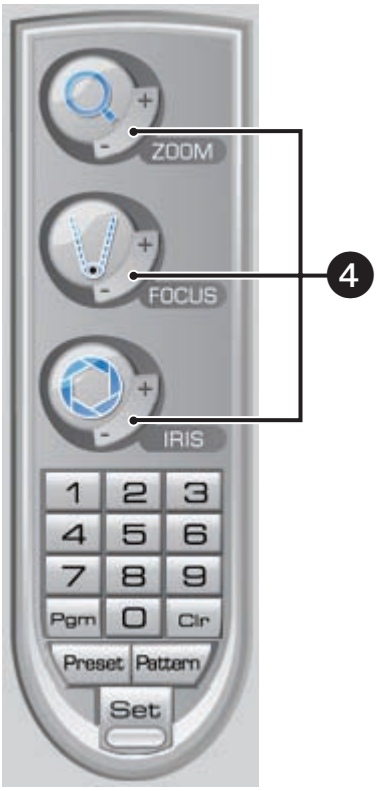

Figure 209. Web Client PTZ Lens Controls

PTZ Presets

A preset is a user-defined camera position using PTZ, and focus commands. A DX8100 Series HVR can address up to 128 PTZ presets (1-32). Preset 95 is reserved for remote camera setup, and preset 99 is reserved for camera autoscan mode.

Only cameras that support positioning and programming using Pelco D, P, or Coaxitron protocols can use this feature.

NOTES: Observe the use of the Set button for presets, preset tours, and patterns as follows:

- To program or clear presets, preset tours, and patterns, the Set button must be engaged.
- To activate presets, tours, and patterns, the Set button must be disengaged.

Programming a Preset

Clicking the Set button places DX8100 in PTZ programming mode. While in PTZ programming mode, multiple presets can be programmed until the Set button is pressed again.

To program a PTZ preset:

1. Drag a camera from the Site Tree onto a view panel.
2. Click the Set button Set.
3. Using the on-screen PTZ controls and PTZ keypad, move the camera to the desired position and adjust zoom and iris settings.

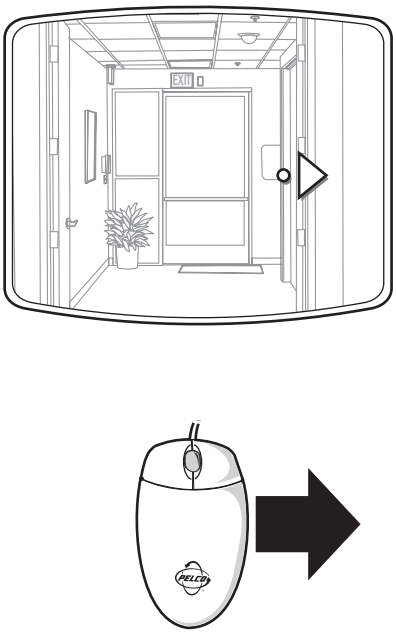

Figure 210. Moving to a Preset Using Web Client

4. Using the PTZ keypad, select a number for the new preset (for example, select 1).

Figure 211. Programming a Preset Using Web Client

5. Click the Preset button [Preset] to store the preset in the selected memory location.
6. Repeat steps 4-6 for each preset you want to program.
7. Click Set button [Set] again to exit programming mode.

Activating a Preset

To activate a preset:

1. Click a preset number (1-32) on the keypad.
2. Click the Preset button [Preset] to activate preset. The camera repositions to the new preset.

   Double-digit presets can be set or activated by pressing the first digit and then the second digit sequentially. For example, preset 20 can be selected by clicking the number 2 and then the 0 (zero) on the PTZ keypad.

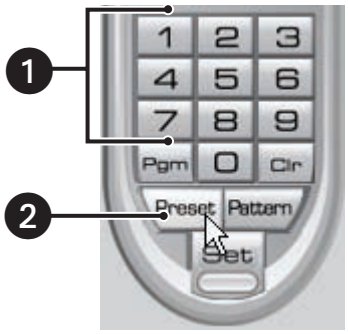

Figure 212. Activating a Preset Using Web Client

Clearing a Preset

To clear a preset:

1. Click the Set button [Set] to enter programming mode.
2. Click the number of the preset you want to clear from the PTZ keypad.
3. Click the Clr button [Clr].
4. Repeat steps 2 and 3 to clear multiple presets.
5. Click the Set button [Set] to exit programming mode.

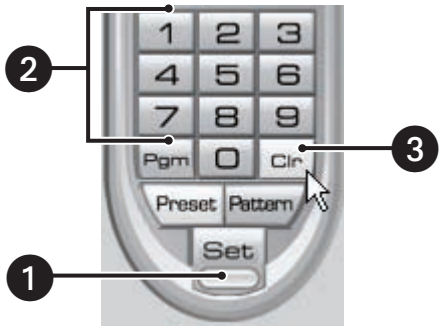

Figure 213. Clearing a Preset Using Web Client

PTZ PATTERNS

A pattern is a user-defined, viewable camera path with a definite beginning and end. Patterns are made up of a sequence of standard pan/tilt, and lens commands. Patterns are stored in the internal memory of the PTZ device, such as a Spectra dome, that is connected to the DX8100. Depending on the type and configuration of the PTZ device, the DX8100 can address up to four unique PTZ patterns. Once defined, a pattern can be activated with a series of on-screen commands. A pattern will run continuously until it is deactivated.

Only PTZ-enabled cameras that support pattern programming through Pelco D, P, or Coaxitron protocols can use this feature.

This section describes how to work with patterns and includes the following topics:

- *Programming a Pattern* on page 239
- *Activating a Pattern* on page 240
- *Clearing a Pattern* on page 240
- *Accessing Programming Features of Remote Cameras* on page 241

Programming a Pattern

To program a pattern:

1. Drag a camera from the Site Tree onto a view panel.
2. Click the Set button [Set] to enter programming mode.
3. Using the PTZ keypad, select a number for the pattern (1-4).
4. Click the Pattern button [Pattern].
5. Navigate the camera through a series of movements using the on-screen PTZ, and focus controls.

Certain PTZ devices, like Pelco's Spectra Series domes, will display an on-screen message with the amount of remaining memory available for pattern programming.

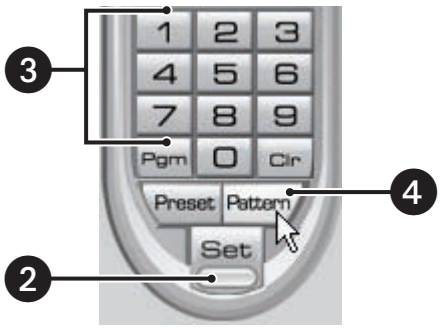

Figure 214. Programming a Pattern Using Web Client

To stop programming a pattern:

1. Click the Pattern button [Pattern].
2. Click the Set button [Set].

Activating a Pattern

To activate a pattern:

1. Click a pattern number (1-4) on the keypad.
2. Click the Pattern button [Pattern].

   A pattern will repeat indefinitely until it is cleared, another pattern is set, or the on-screen PTZ control is moved.

Figure 215. Activating a Pattern Using Web Client

Clearing a Pattern

To clear a pattern:

1. Click the Set button [Set] to enter programming mode.
2. Select a pattern number (1-4) on the keypad.
3. Click the Pattern button [Pattern].
4. Click the Clr button [Clr].
5. Click the Pattern button [Pattern] again.

6. Click Clr button [Set] again to exit programming mode.

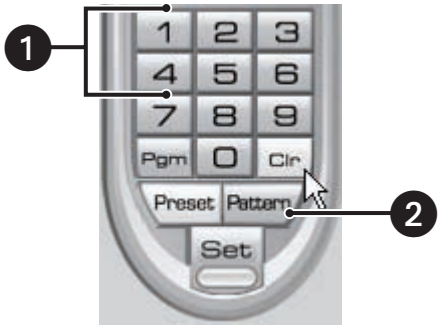

Figure 216. Clearing a Pattern Using Web Client

Accessing Programming Features of Remote Cameras

You can use the PTZ function to program features of remote cameras, such as Pelco's Spectra III. Only cameras that support remote programming through Pelco D, P, or Coaxitron protocols can use this feature.

To access a programming menu for a remote camera:

1. Drag a camera from the Site Tree onto a view panel.
2. Click the Pgm button [Pgm] to access remote camera setup mode.

   For certain camera models, you can also select preset number 95 from the keypad to access remote setup mode. To access preset number 95, click the Set button [Set], click button 9, 5, and then click the Preset button [Preset] from the PTZ keypad.

Figure 217. PTZ Control Panel Using Web Client

3. Use the on-screen PTZ controls or the focus (+) and focus (-) buttons to navigate up and down through the camera menu choices.

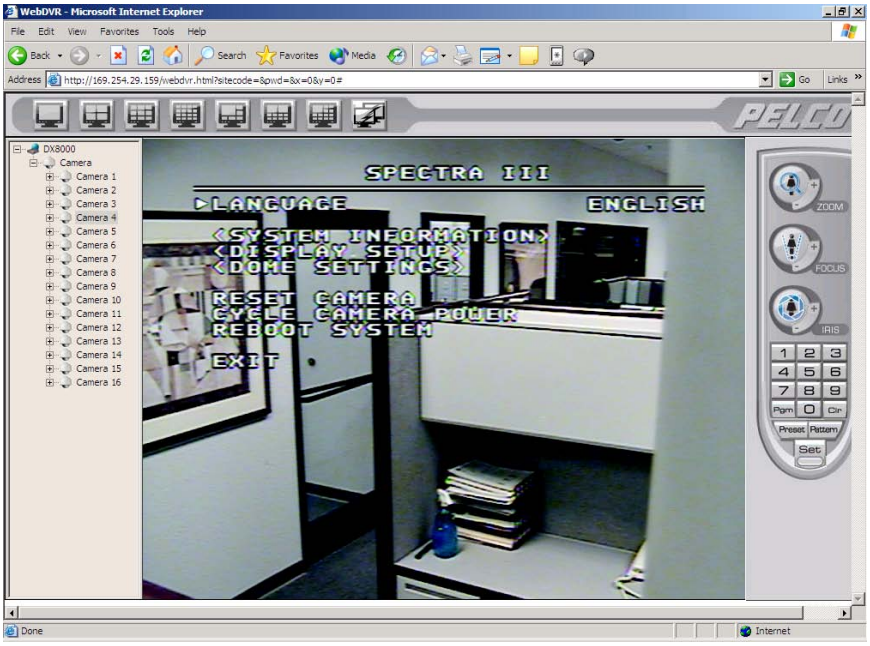

Figure 218. Camera Setup Menu

4. Click the iris (+) button to select an option from the camera's on-screen menu.
5. Click the iris (-) button to cancel an option or exit a menu.

You can also use the on-screen PTZ controls with your mouse to navigate through camera menus. Click and drag the mouse up or down to move between menu options, and then select the option using the iris (+) button.

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PRODUCT WARRANTY AND RETURN INFORMATION

WARRANTY

Pelco will repair or replace, without charge, any merchandise proved defective in material or workmanship **for a period of one year** after the date of shipment.

Exceptions to this warranty are as noted below:

- Five years:
  - Fiber optic products
  - TW3000 Series unshielded twisted pair (UTP) transmission products
  - CC3701H-2, CC3701H-2X, CC3751H-2, CC3651H-2X, MC3651H-2, and MC3651H-2X camera models
- Three years:
  - Pelco-branded fixed camera models (CCC1390H Series, C10DN Series, C10CH Series, IP3701H Series, and IX Series)
  - EH1500 Series enclosures
  - Spectra® IV products (including Spectra IV IP)
  - Camclosure® Series (IS, ICS, IP) integrated camera systems
  - DX Series digital video recorders, DVR5100 Series digital video recorders, Digital Sentry® Series hardware products, DVX Series digital video recorders, and NVR300 Series network video recorders
  - Endura® Series distributed network-based video products
  - Genex® Series products (multiplexers, server, and keyboard)
  - PMCL200/300/400 Series LCD monitors
- Two years:
  - Standard varifocal, fixed focal, and motorized zoom lenses
  - DF5/DF8 Series fixed dome products
  - Legacy® Series integrated positioning systems
  - Spectra III™, Spectra Mini, Spectra Mini IP, Esprit®, ExSite®, and PS20 scanners, including when used in continuous motion applications.
  - Esprit Ti and TI2500 Series thermal imaging products
  - Esprit and WW5700 Series window wiper (excluding wiper blades).
  - CM6700/CM6800/CM9700 Series matrix
  - Digital Light Processing (DLP®) displays (except lamp and color wheel). The lamp and color wheel will be covered for a period of 90 days. The air filter is not covered under warranty.
  - Intelli-M® eIDC controllers
- One year:
  - Video cassette recorders (VCRs), except video heads. Video heads will be covered for a period of six months.
- Six months:
  - All pan and tilts, scanners, or preset lenses used in continuous motion applications (preset scan, tour, and auto scan modes).

Pelco will warrant all replacement parts and repairs for 90 days from the date of Pelco shipment. All goods requiring warranty repair shall be sent freight prepaid to a Pelco designated location. Repairs made necessary by reason of misuse, alteration, normal wear, or accident are not covered under this warranty.

Pelco assumes no risk and shall be subject to no liability for damages or loss resulting from the specific use or application made of the Products. Pelco's liability for any claim, whether based on breach of contract, negligence, infringement of any rights of any party or product liability, relating to the Products shall not exceed the price paid by the Dealer to Pelco for such Products. In no event will Pelco be liable for any special, incidental, or consequential damages (including loss of use, loss of profit, and claims of third parties) however caused, whether by the negligence of Pelco or otherwise.

The above warranty provides the Dealer with specific legal rights. The Dealer may also have additional rights, which are subject to variation from state to state.

If a warranty repair is required, the Dealer must contact Pelco at (800) 289-9100 or (559) 292-1981 to obtain a Repair Authorization number (RA), and provide the following information:

1. Model and serial number
2. Date of shipment, P.O. number, sales order number, or Pelco invoice number
3. Details of the defect or problem

If there is a dispute regarding the warranty of a product that does not fall under the warranty conditions stated above, please include a written explanation with the product when returned.

Method of return shipment shall be the same or equal to the method by which the item was received by Pelco.

RETURNS

To expedite parts returned for repair or credit, please call Pelco at (800) 289-9100 or (559) 292-1981 to obtain an authorization number (CA number if returned for credit, and RA number if returned for repair) and designated return location.

All merchandise returned for credit may be subject to a 20 percent restocking and refurbishing charge.

Goods returned for repair or credit should be clearly identified with the assigned CA or RA number and freight should be prepaid.

12-23-08

Green The materials used in the manufacture of this document and its components are compliant to the requirements of Directive 2002/95/EC.

This equipment contains electrical or electronic components that must be recycled properly to comply with Directive 2002/96/EC of the European Union regarding the disposal of waste electrical and electronic equipment (WEEE). Contact your local dealer for procedures for recycling this equipment.

REVISION HISTORY

Manual #	Date	Comments
C2631M	9/06	Original version.
C2631M-A	6/07	Added new features: full screen button, unlimited number of Web client connections using multicasting, and exporting and prining backed up video.
C2631M-B	4/08	Added new features: Expanded ATM/POS and system health check.
C2631M-C	7/09	Added new features: IP camera support and remote Client connection to as many as 200 servers (DX8100 and DX8000).

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